DESCRIPTION AND ASSESSMENT OF A PROGRAM FOR THE CERTIFICATION OF PRINCIPALS

A Prototype Curriculum for Principal Certification Programs

K. A. LEITHWOOD

This research project was funded under contract by the Ministry of Education, Ontario.

It reflects the views of the author and not necessarily those of the Ministry.

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Contract 0909
ON04227

Canadian Cataloguing in Publication Data

Leithwood, K. A. (Kenneth Arthur), 1942
Description and assessment of a program for the
certification of principals

Issued also in French under title: Description et
évaluation d'un programme de formation à l'intention
des directeurs d'école
Includes bibliographical references.
ISBN 0-7729-3506-8

1. School principals — Training of — Ontario.
I. Ontario. Ministry of Education. II. Title.

LB2831.926.C2L44 1988 371.2'012 C88-099609-9

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Abstract

This project was intended to describe and to assess the value of a program for the certification of those aspiring to the principalship in Ontario. An existing program, offered through the Centre for Principal Development at the Ontario Institute for Studies in Education, was taken as a point of departure for the period. From this experience, a prototype curriculum was developed using two bodies of research-based knowledge: knowledge concerning effective school administration practices and knowledge concerning the design of effective adult instruction.

The resulting prototype curriculum consists of the following components:

1. a conception of effective school administration
2. curriculum objectives based on this conception
3. a model of adult learning
4. instructional strategies reflecting such a model
5. instruction materials
6. student and curriculum evaluation procedures (including example instruments)

Chapter 1
Elements of a Prototype Curriculum and the Basis for Curriculum Objectives

1.1. Elements of a Prototype Curriculum

The prototype curriculum for aspiring school administrators outlined in this document is intended for several purposes. One purpose is to provide those considering the development of a curriculum themselves, for the first time, with a general idea of what might be the outcome of their work. A second purpose is to identify critical issues which curriculum developers should consider and resolve to their own satisfaction during the process of generating their own curricula. Finally, because the prototype represents one coherent set of responses to such critical issues, it serves as a benchmark against which existing curricula might be tested and possibly refined.

This prototype is not intended as a "guideline" to be implemented "with fidelity": institutional and regional differences in the contexts for offering certification programs are too large to warrant such an intention. Furthermore, experiences to date with alternative curricula suggest that most are capable of addressing effectively at least a portion of the needs of participants, at least from the point of view of those participants and from that of external evaluators.

The basic issues to be addressed by developers of a curriculum for aspiring school administrators are what to teach and how to teach it. This chapter begins to address the first of these issues by describing one image of effective school administration. This conception is the product of a considerable amount of research and parts of it have already served as a focus for a number of pre-service and in-service programs. Nevertheless, the overriding thesis of this chapter is that the objectives for a curriculum for school administrators should be based on some coherent, defensible conception of effective practice, if not the conception described in this chapter, then some other equally defensible conception. Chapter 2 outlines the knowledge, skill, and affective objectives that one might achieve in order to be capable of approximating the practices described in the present chapter.

Chapter 3 begins to respond to the question of how to teach toward the objectives outlined in the previous chapter. It does this by outlining a model of learning and, from the model, deriving instructional conditions likely to foster such learning. Chapter 4 proposes specific strategies for creating such instructional conditions: it does so by (a) defining the basic role of instructors implementing the core curriculum (b) showing which widely-used instructional techniques are most likely to foster which instructional conditions (c) discussing the special role of a practicum and (d) providing an example of a schedule for instruction.

The remaining components of the prototype curriculum include resource materials, examined in Chapter 5, and student and course evaluation procedures, discussed in Chapter 6. In addition to procedures for evaluation as outlined in Chapter 7, an instrument for the assessment of participants' relevant knowledge, skill, and affect is included as an appendix.

Parts of the prototype curriculum are loosely based on the curriculum developed and implemented by OISE's Centre For Principal Development (CPD). The prototype, however, goes beyond versions of the CPD curriculum that have been offered in the past but is close to what is planned for the future.

The prototype curriculum was designed to help prepare potential school administrators for the job. Objectives for the curriculum, as a result, should be derived from a defensible conception of the job as it is practiced by those knowing how to do it well. One such conception is provided in this chapter: it assumes that problem solving is a generic human activity and that it offers a helpful starting point for clarifying the nature of effective school administration.

1.2. Types of Administrative Problems and Responses

School administrators encounter a large array of problems that they are expected to solve. These problems range enormously in their complexity and, as a consequence, demand very different types of responses from school administrators.

Problem solving is typically defined as the process of transforming a current state into a goal (or more desired) state (e.g., Baird, 1983; Frederiksen, 1984). This process encompasses a problem identification, clarification or definition phase and a solution phase. Among the most crucial determinants of difficulty in problem solving is the certainty the solver is able to bring to each of these phases of the process: such certainty is a function of the amount and organization of the solver's problem relevant knowledge. When the solver has a great deal of well organized relevant knowledge, certainty is high and the problem is considered "well structured". When problem relevant knowledge is minimal and/or poorly organized, certainty is low and the problem is labelled "unstructured".

Figure 1.1 displays the relationship between problem elements and three levels of knowledge or structure as the basis for classifying school administrators' problems. (By examining the different levels of knowledge that may exist in each aspect of problem solving, it is possible to classify administrators' problems by the type of response that they require.) There are four such categories of response although they are less clearcut than the framework seems to suggest:

- the routine application of known procedures (A_1);
- the choice of problems and solutions from known alternatives (B_1, B_2, A_2);
- the development of problems and solutions largely from known alternatives (C_1, C_2, A_3, B_3);
- the definition of novel problems and creation of solutions by combining previously unassociated ideas (C_3).

1.2.1. Routine Application of Known Procedures

This type of response is required under conditions identified in Figure 1.1 as "A_1". Both the nature of the problem and the processes for solving it are clear to the administrator. What is required is a form of technical action that draws on a repertoire of procedural knowledge acquired through training and experience. Such procedural knowledge is one of the primary claims to status in professional work. When such knowledge is restricted in scope or of questionable validity the area of work with which it is associated is not awarded professional status or is recognized as a minor profession (Glazer, 1974).

When school administrators develop a high level of skill in the application of procedures, they are

Level of Knowledge re: Nature of the Problem			
Level of Knowledge re: Nature of Solution	High (1)	Moderate (2)	Low (3)
High (A)	A_1	A_2	A_3
Moderate (B)	B_1	B_2	B_3
Low (C)	C_1	C_2	C_3

Figure 1-1: A classification of school administrators' problems

able to respond "automatically" to many of the routine aspects of their work. This saves mental energy which then can be devoted to more problematic aspects of their jobs. Automaticity in the use of valid procedures is one attribute of expert problem solving in most domains of human activity.

1.2.2. Choosing Problems and Solutions From Known Alternatives

Decision making appears to be an apt description of the responses required of administrators in Figure 1.1 labelled B_1, B_2, A_2. These conditions identify the contingent nature of a portion of the school administrators' job. Valid procedures are still useful under these conditions. But, as a minimum, the administrator must decide which procedures are relevant and when they should be applied; automaticity is not appropriate. In addition (as in B_1 and B_2), some preliminary clarification of the problem may well be required before it is possible to know which alternative solutions or solution processes are relevant to weigh.

1.2.3. Developing Problems and Solutions From Largely Known Alternatives

The conditions of uncertainty identified in Figure 1.1 as "A_3", "B_3", "C_1", and "C_2" call for responses that are more complex than simply choice making. Under these conditions, the problem may be moderately (C_2) to quite (A_3, B_3) unclear and considerable effort could be required to decide just what elements of the situation one is confronted with are worth further attention. Even when the problem is clear from the outset as in A3, however, a solution must be created. That is, while bits and pieces of well known solutions may look promising, at least some recombination is required in order for the administrator's response to be truly helpful. This type of response demands a considerable amount of conscious cognitive energy, especially under the least certain conditions.

1.2.4. Defining Novel Problems and Creating Solutions

The least certain set of conditions prevails in the case of C_3. Such lack of structure demands relatively creative mental activity; this is likely to involve the linking of previously unassociated ideas in order to reach an adequate definition of the problem and a suitable solution or solution process.

These four types of responses, demanded by varying degrees of knowledge or problem structure, provide a plausible starting point for identifying the educational needs of aspiring school administrators. The extent to which a prototype curriculum can meet these educational needs depends, first of all, on the extent and quality of our knowledge about effective school administration. At present, a considerable amount of knowledge is available to assist aspiring administrators in the first two categories of responses discussed above (routine application of known procedures and choosing solutions to recognized problems). Because these types of responses represent a large proportion of the administrators" world, it is important

that they not be neglected. Furthermore, they may be characterized as the basic skills of administration and, therefore, an essential focus of a pre-service education program.

Pre-service education should aspire to provide more than the basics, however, as Schön has suggested:

> In the varied topography of professional practice, there is a high, hard ground where practitioners can make effective use of research-based theory and technique, and there is a swampy lowland where situations are confusing "messes" incapable of technical solution. The difficulty is that the problems of the high ground, however great their technical interest, are often relatively unimportant to clients or to the larger society, while in the swamp are the problems of greatest human concern (1983, p.42).

Now, it is doubtful that a patient about to undergo a routine appendectomy would dismiss the value of medical technique quite so readily as does Schön. Nevertheless, Schön's argument for the importance of the problems submerged in the swamp cannot be otherwise dismissed. There are compelling reasons for incorporating at least an introduction to "swamp-draining skills" in the prototype curriculum for aspiring school administrators. In the next section of this chapter, a conception of effective administrative practice on the "high ground" is summarized. This is followed by a review of the limited knowledge currently available concerning effective "swamp-draining" practices (the third and fourth categories of responses discussed above).

1.3. A Conception of Effectiveness "On the High Ground"

A considerable body of research on principal effectiveness has been published in the past eight years (for reviews see Leithwood and Montgomery, 1982, 1986; Leithwood, 1982). The dominant focus of this research has concerned the procedures, used by principals, that appear to be helpful under well structured or moderately structured conditions. This section summarizes what has been learned about effective administration under these conditions. A framework used by Leithwood and Montgomery (1986) provides the organization for this summary; it is a multidimensional, multilevel framework for describing growth in principal effectiveness called The Principal Profile.

The profile, summarized in Figure 1.2 describes four levels of growth in principal effectiveness within four dimensions of practice. Dimensions of practice include (1) principals' goals, (2) factors in the school and classroom that principals try to influence in order to achieve their goals, (3) actions or strategies principals employ to exercise such influence, and (4) the nature of principals' decision-making processes concerning each of these other dimensions. These dimensions may be viewed as elements of the problem-solving process used by effective principals when responding to relatively well structured problems. The levels of effectiveness within these dimensions are labelled the *systematic problem solver* (most effective), *program manager*, *humanitarian*, and *administrator* (least effective). Higher levels of stages or effectiveness represent an accumulation of skills, knowledge, and attitudes from lower levels on the part of the principal, as well as some significant shifts in the nature of the principal's beliefs. Principals at higher levels continue to engage in many practices evident at lower levels but such practices are usually parts of a more extensive repertoire, rather than the whole repertoire.

Before describing the contents of the profile, several indirect but important features should be noted. First, most principals vary, to some degree, in the level of their practices across the dimensions and subdimensions of the profile. Second, only a very small proportion of principals work predominantly at the highest level described in the profile. Third, most school systems consider the lowest level in the profile to describe minimally acceptable, rather than unacceptable, principal practice. Finally, the profile focuses on types of practices that seem to be acquirable given adequate school system support for the principal.

The profile is described in the following section. This is a selective elaboration of the information summarized in Figure 1.2 and presented in much greater detail elsewhere (e.g., Leithwood & Montgomery, 1986). In some instances practices are outlined through all four levels in the profile; in others, where the nature of change is straightforward, the most and least effective forms of practice are contrasted.

1.3.1. Goals

Goals are long-term aspirations held by principals for work in their schools and are the dimension of principal practice most consistently linked to school improvement by current empirical research. Moreover, virtually no conflict exists within this research regarding the type of goal-related practices that are effective. These practices can be described in terms of the nature, sources, and uses of goals.

NATURE OF GOALS

Highly effective principals (Level 4) have an implicit or explicit philosophy of education including an image of what it means to be educated. This image is consistent with the values of the larger public served by the school and is likely to encompass knowledge, skill, and affective student outcomes. All categories of outcomes are considered important by these principals. With this complete image as a frame of reference, effective principals' goals are to provide the best education and best experiences possible for students served by the school. Such experiences tend to extend beyond the formal instructional setting. Because the definition of the educated person evolves over time, effective principals are knowledgeable about changes relevant to goals for students and receptive to changes that might help to achieve such goals.

In contrast to highly effective principals, principals at the least effective level on the profile (Level 1) believe that teachers teach and the principal runs the school. Maintaining a smooth-running school is their main goal, bringing with it a dominant concern for administrative logistics. While these principals sometimes justify their focus on the grounds that students and teachers require a tranquil environment in which to work, running a "smooth ship" has become an end in its own right. Change is a source of annoyance to these principals since it challenges the maintenance of established rules and routines.

As the principals grow in effectiveness, their goals become increasingly based on a view of the educated person, increasingly consistent with those of the larger school community, and increasingly open to change in the face of reasonable evidence for the need to change.

SOURCE OF GOALS

Principals differ about the sources from which their goals are derived. As principals increase in their effectiveness, the sources from which their goals are selected become increasingly public in origin and greater in number. Highly effective principals (Level 4) systematically select their goals from those espoused for students by the Ministry of Education, from their school board, and from the perceived needs of the community and students served by the school. Because the least effective principals, as described by the profile, value running a smooth school (administratively), their goals derive from a sense of the administrative tasks requiring attention in order for this to be achieved. Goals do not often spring from curricular, instructional or interpersonal considerations.

USES OF GOALS

Internalized goals serve as a potential focus for principals in planning their actions and as a source of criteria for deciding what those actions will be. As principals increase in their effectiveness, there is greater congruence between their espoused goals for school improvement and their planning and decision

making. Less effective principals sometimes espouse goals very similar to those of their highly effective colleagues, but seem to ignore them in practice.

In addition to these personal uses of goals, highly effective principals seek out opportunities to clarify goals with staff, students, parents, and other relevant members of the school community. They work toward consensus about these goals and actively encourage their use in departmental and divisional planning. While Level 1 forms of practice sometimes include such clarification of goals, it is common for these principals to simply assume staff knowledge and agreement.

1.3.2. Factors

Goals are conceived as long-term professional aspirations held by principals for their work. Goal attainment depends, in substantial measure, on the ability of principals to identify those elements of the school, called factors, that most account for what students learn. Goal attainment also depends on the principal's determining those conditions within factors that have to be realized if student learning is to improve. Highly effective principals consider some 18 factors. Of these, 10 bear directly on students' classroom experiences, largely through the teacher:

- which teacher teaches which students;
- the objectives or outcomes teachers work toward with students, including the emphasis teachers place on different types of objectives;
- teaching strategies including the types of learning activities these strategies are designed to provide for students;
- the types and amount of material and resources available and the nature and degree of their use;
- the ways in which teachers assess, record, and report student performance and experience;
- the way time is allocated, and things teachers do to get and keep students focused on the learning task including student discipline and control;
- the subject matter, themes, or topics encountered by students in their programs;
- the organization and appearance of the physical environment of the classroom;
- the role model provided by the teacher, the nature of the relationships between the students and the teacher and between students and students in the classroom;
- the nature and degree of integration among curricular objectives within and across programs and grades.

A second cluster of factors considered by effective principals affects the experience of students while in the school but outside the classroom:

- the functions, assignments, and roles of people in the school and classroom (including decisions about which teachers teach what grades and subjects; the role of the psychologist, the janitor, etc.);
- the form and substance of communications and relationships with the community;
- the nature and degree of organized out-of-classroom (area) experiences for the students;

- the adult role models provided by staff as individuals and as they interact with one another; the form and substance of communications among staff;
- the form and substance of communications and relationships with out-of-school, school system staff;
- the conduct of students while the school is responsible for them;
- the nature of the relationships teachers develop with students on the playground, in the halls, and the like, and the role model provided by teachers in these relationships.

Variations in principal effectiveness concerning factors is a function of the factors principals select for attention and the source and nature of expectations held for these factors.

1.3.3. Factors of Most Concern

As principals increase in effectiveness, the factors they attempt to influence increase in number and change in focus. To a predominant concern for factors bearing on school appearance and the day-to-day operations of the school (Level 1, the administrator), especially outside the classroom (e.g., student behaviour, material and physical resources) is added a concern for interpersonal factors (Level 2, the humanitarian). These in turn, are subsumed, but not replaced, by attention to program-related factors such as program objectives, use of time and its management (Level 3, the program manager), and at the most effective principal level (Level 4), by attention to all factors. This pattern of growth toward attention to all factors is directly related to and explained by principals' goals. The more closely linked to school improvement such goals become, the greater the likelihood that factors selected for attention include those likely to facilitate school improvement.

While highly effective principals systematically address all factors, they do so only over an extended period of time. Short-term priorities often require placing emphasis temporarily on a small set of factors. In contrast, the least effective principal behaviour (Level 1) is characterized by long-term, consistent inattention to many factors and attention to others only when provoked by a crisis (e.g., parental complaints about a curriculum topic).

NATURE OF EXPECTATIONS

As principals become more effective, their expectations within factors also become more defensible and more consistent with prevailing professional judgement and the results of research. This suggests that such expectations, when met, stand a better chance of actually resulting in school improvement or goal achievement. Expectations also become increasingly detailed or concrete with increased principal effectiveness. Highly effective principals, for example, are better able to see which special characteristics of their schools need to be accounted for in formulating expectations they hold for factors and, specifically, how such characteristics might influence those expectations in practice.

Principals at Level 1 on this subdimension of practice have vague expectations regarding the limited number of factors to which they attend. At Level 2, expectations tend to be high but still general; for example, staff are expected to "cooperate with one another", but what such cooperation entails is not made clear by the principal. Program managers (Level 3), although not concerned with the full array of factors, as are the most effective principals, are quite specific in their expectations for those factors of concern.

SOURCES OF EXPECTATIONS

Information used in formulating expectations also varies with principal effectiveness and comes from many sources. Increased effectiveness, however, is associated with systematic rather than incidental or whimsical attention to non-personal sources. Expectations at the least effective level vary according to what principals believe to be appropriate to the immediate situation. Such expectations are highly negotiable and can be swayed by staff preferences, parental demands, administrative demands, or the principal's interpretation of an educational trend. As principals become more effective, multiple sources of "valid" knowledge are actively sought out and accommodated in formulating expectations. These sources of information increase the sophistication or validity of principals' knowledge, hence the nature of their expectations.

1.3.4. Strategies

Having identified factors associated with the achievement of valued goals, principals still must act or intervene to influence selected factors in directions they consider most likely to assist in goal achievement. Principals employ a repertoire of both "general-purpose" and "factor-specific" strategies to accomplish goals.

General-purpose strategies are considered by principals as useful in influencing the condition of almost any factor, depending very much on circumstances in the school at the time action is taken. Such strategies establish an appropriate background and climate within which more factor-specific action still has to be initiated to ensure goal achievement. Among the seven general-purpose strategies used by principals, the four that focus on keeping those involved in decision making willing to participate and well informed were the following:

- the building and maintenance of interpersonal relationships and motivating staff;
- provision of staff with knowledge and skills;
- facilitation of within-school communication, and
- facilitation of communication between school and community.

Two additional strategies that address the provision of adequate organizational resources for staff work are as follows:

- allowance for non-teaching time for staff;
- establishment of procedures to handle routine matters.

The final strategy is using vested authority; the purpose of its use varies significantly from ineffective to effective principals.

After appropriate background and climate are established, factor-specific strategies can begin to exercise a direct influence on selected factors. They include:

- program monitoring;
- goal setting, program planning, and development;
- program implementation;

- staff supervision;
- provision of support resources;
- direct relationship with students.

Different levels of effectiveness among principals are evident in the criteria they use for choosing strategies.

CRITERIA AND EMPHASIS

As the strategic effectiveness of principals increases and their goals expand, the number and nature of strategies used over extended periods of time also increases. This increase can be traced back to the changes in types of goals, from a focus on administrative concerns through interpersonal relations to the school program and finally to student achievement. Achieving goals increasingly linked to student achievement eventually demands attention to all factors. Effectively influencing all factors requires the use of virtually all general-purpose and factor-specific strategies. And effectiveness also depends on principals' ability to identify strategies that deal with weak or problem aspects of their own school's background or climate.

Principals least effective on this sub-dimension (strategy selection) of practice need to feel in control of administrative matters in their school. Such control is usually assumed through the use of vested authority. These principals prefer not to be involved in decisions about curriculum or instruction, designating these as exclusively teachers' responsibilities. They also select other general-purpose strategies on the basis of intuitive judgement about what is required to keep the school operating smoothly. For example, attention will be given to interpersonal relationships among staff when a serious problem arises in such relationships.

Principals at the next higher level of effectiveness seek out strategies that contribute to a warm, friendly climate in the school, often considering positive climate an end in its own right. They frequently give considerable attention to such strategies as being positive, cheerful, and encouraging, accessible to staff, acting as a role model, and facilitating communication within the school and between the school and community. When vested authority is used, their reasons vary from a desire to make teachers' lives easier by freeing them from decision-making responsibility to their convictions that some decisions are too specialized or important to be left to chance, such as school budgets and teacher record keeping.

A dominant concern for making fair, well-informed, consistent decisions and helping staff to do the same is a characteristic of program managers (Level 3). This concern motivates the systematic collection and distribution of information relevant to crucial decisions to staff. Such communication with the community is also viewed as an essential ingredient in building broader support for the school's program.

The most effective principals use a complex set of considerations in choosing their strategies, including (1) the goals to be achieved, (2) the factors to be influenced, (3) characteristics of the people involved, (4) other activities already underway in the school, (5) school and school system norms, (6) past experiences, and (7) the nature of obstacles to be overcome. These concerns are used simultaneously and are viewed clearly as means rather than ends. Most general-purpose and factor-specific strategies are used at some time by these principals to attain their goals.

QUALITY AND SKILL

Principals sometimes choose strategies well suited to factors in need of influence and still fail to

exercise much influence. One cause of this failure is the quality of strategies used. The effect of principal's actions are partially a function of the specific procedures associated with their strategies. Principals increase in effectiveness as their procedures become relatively more efficient in influencing factors (e.g. more readily used by others; many principal-initiated strategies depend on other members of staff to complete). Strategies also are more effective as they become more adaptable to changing school conditions. For example, program planning procedures useful across all areas of the curriculum seem to be generally more effective in stimulating subject-matter integration by teachers than strategies that are unique to subject areas. In The Principal Profile, differences in the quality of strategies used is particularly evident in such factor-specific strategies as program implementation.

Highly effective principals have a strategy for program implementation that includes well-refined, detailed steps applicable to many programs. Less effective principals either do not deal with implementation (Level 1) or have no systematic approach to the process (Level 2).

It is still possible, however, for a principal to select a strategy potentially able to influence the factor(s) of concern, possess extensive knowledge about how to carry out the strategy, and still not obtain the desired effect. This is the case when principals' actual skill in using the strategy is flawed in a crucial way. For example, some principals know that establishing good relations with the community requires listening carefully to parental concerns and patiently moving from such concerns, however expressed, toward a focus on how they are addressed in the school program. Yet these principals allow themselves to be frustrated with parental inquiries and frequently became defensive in their responses. Highly effective principals, on the other hand, are skilled in most of the general-purpose and factor-specific strategies. As principals become highly skilled in their performance of a strategy, less conscious effort is required of them. This reduces the time required for them to respond to matters demanding their immediate attention (e.g., a report of drug use in the boys' washroom) and allow them to attend to other problems for which solutions are less well known (e.g., increasing collaborative curriculum planning across departments in the school).

1.3.5. Decision Making

Decision making is a process that permeates the other dimensions of principal practices and helps account for the quality of that practice.

Differences in the way principals choose their directions, select aspects of the school for attention, and decide to act accounts for much of the difference in principals' effectiveness. Two aspects of the decision-making process are particularly important. One is the context within which specific decisions are made -- the forms and procedures used in decision making, principals' attitude and stance toward the process, and the monitoring of decision making. The second aspect concerns components of decision making -- how decisions are defined, what criteria are considered relevant, and the use of information.

FORMS AND PROCEDURES FOR DECISION MAKING

Highly effective principals know about and demonstrate use of a range of different forms of decision making in their schools. Sometimes they make unilateral decisions, sometimes they delegate the responsibility to others. Frequently there is extensive participation in the process with choices arrived at through consensus or, occasionally, by majority vote. The *least* effective principals make many more unilateral decisions. When staff participate in the process, choices are usually based on majority vote. These same principals appear to give little conscious thought to which form of decision making to use. In contrast, the most effective appear to arrive at a choice of form by consciously reviewing staff preferences

and abilities, existing decision-making practices in the school, the nature of the decision to be made, and experience from past decisions.

While highly effective principals are eclectic in the forms of decision making they use, they nevertheless have strong preferences toward decentralization and extensive staff participation. Unlike those who are least effective, they use many decision-making occasions as opportunities to foster conditions conducive to extensive decentralization (staff willingness, skill, and a climate in which the motives of those participating in decisions are widely trusted). Further, such principals are knowledgeable about how decisions are made in departments or divisions in their schools and work toward compatibility in decision-making processes at all levels in the school. Those least effective tend to be out of touch with decision-making processes in which they are not directly involved. Considerable diversity in such processes is typical within their schools.

Variation in the procedures principals establish for decision making is also common. Lack of consistency in such procedures is common among principals least effective in decision making. For example, sometimes their procedures allow for different points of view to be heard, sometimes not; sometimes criteria for decision making are made explicit, sometimes not. By comparison, those most effective in this practice establish procedures to help ensure consistent attention to alternative points of view (including competing values), criteria relevant to the decision, clarification of the decision, and collection of relevant information. These latter principals also have procedures (like the development of a calendar listing all major decision points in the year) for anticipating decisions and ensuring that needed decisions do not "fall through the cracks".

ATTITUDES AND STANCE TOWARD DECISION MAKING

Levels of effectiveness in this subdimension of practice vary in the extent to which principals seek out decision-making opportunities or react to the necessity for decisions to be made. Those most effective tend to seek out decisions; they view even minor decisions as opportunities to move incrementally toward their goals. They seem able to anticipate a large proportion of decisions that have to be made and use them to their advantage. Least effective principals seem unable or unwilling to forecast many upcoming decisions. As a result, they find themselves continually reacting to decision-making situations within a time frame established by others. They rarely have enough time to make decisions carefully and, not surprisingly, tend to have negative attitudes toward change. Their stance toward decision making could be called crisis management.

MONITORING DECISION MAKING

Principals least effective in monitoring the process of decision making and its consequences rely on their feelings (i.e., informal observations, number of problems arising) about "how well things are going." Problems are reacted to in a piecemeal fashion with little effort to prevent them from recurring. At Level 2, staff satisfaction with decisions is frequently assessed. At Level 3, routine checks are typically made of principals' school decision making; special attention is given to how well the process meets the principal's standards of fairness and consistency and to the principal's perceptions of how well school needs are being met. In monitoring, the most effective principals systematically review and refine the forms and procedures used. Information is usually sought regarding the satisfaction of most of these affected by the decision, including school staff; typically, resources or costs of the decision process (e.g., amounts of time spent by department staff in selecting a new textbook) and the contributions of decisions toward school goals (e.g., did the textbook selected seem to be the best one to contribute to program objectives?) are examined.

DEFINING DECISIONS AND SELECTING CRITERIA

Variation in how principals define decisions and the criteria they use appear to be closely related to variations in principals' goals. When running the school smoothly is the overriding concern, as in Level 1, principals tend to take the path of least resistance to their decision making -- they respond swiftly to symptoms (e.g., placating a parent concerned about the amount of homework given to his child) but ignore underlying causes (e.g., absence of a school homework policy). The transformation of primarily administrative goals into criteria for decision making sometimes leads to questionable emphases in the school. For example, some principals respond to broad pressures regarding the basics in such a way as to entirely ignore other equally important goals. In some decisions where these principals' usual criteria cannot be applied, choices are made intuitively with the claim that much about education is intuition.

An overriding concern for a broad range of student outcomes, as in Level 4, is associated with efforts to uncover and clarify the fundamental causes of problems. Criteria, directly based on the goals of education, include: the need for individual programs, students' stages of development, and the need to balance emphasis among knowledge, skill, and affective objectives. Other staff are actively encouraged to use similarly oriented criteria in their decision making.

Growth is also evident in how realistic and solvable are the decisions defined by the principal. Less effective principals have a greater tendency to portray problem situations as inaccessible (e.g., not enough time or money, not their problem, age of staff). The same basic problems are frequently cast in much more accessible terms by more effective principals (e.g., weighing school priorities, staff motivation, and interest).

USE OF INFORMATION

Principals least effective in their use of information in decision making collect little information within the school except for that information requested by central administrators. They tend to read report cards and are open to receiving other information but do not seek it. In contrast, the most effective principals accumulate information about most major functions of the school in a systematic way. They have procedures for routinely ensuring adequate information as a basis for major decisions. Further, they encourage staff to do the same and expect them to be able to identify the sources of information for their decisions. The least effective principals only press staff for information if the decision is of special interest to them.

Information used most frequently by principals at Level 1 concerns administrative matters and their responsibilities in such matters. This information is usually available in the form of memos and policies from the board or Ministry of Education. Level 2 forms of practice are characterized by seeking out information from staff, particularly about such issues as student morale and relationships with parents. Frequent informational visits to classrooms is a typical method of collecting this information. At Level 3, information is also sought about curriculum development and implementation activities in the school and program requirements as outlined by the board or Ministry of Education. Principals at this level gather information through classroom visits, analyses of test results, reading of report cards, parental surveys, teacher plans, and other formal assessments of student needs.

Principals most effective in their use of information add to the practices described in Level 3, a general knowledge about curriculum and education gleaned from reading recent research. This information is interwoven with school-specific information during decision making. These principals also encourage their staff to be familiar with and take account of research-based information in their own decision making. Level 4 principals attempt to keep staff well informed through, for example, the

development of a handbook of procedures for school routines and carefully orienting new staff to school expectations and procedures.

1.3.6. Summary

The central purpose of this section was to provide a defensible conception of growth in effective principal practices "on the high ground" as a basis from which to derive goals for a pre-service preparation program for aspiring school administrators. This conception was based on The Principal Profile (Leithwood & Montgomery, 1986), which describes four levels of growth in effectiveness.

Systematic problem-solver principals display the most effective forms of practice described in the profile. The three levels of effectiveness leading up to the systematic problem solver are the administrator, the humanitarian, and the program manager. The administrator level is the least effective. Principals at this level are preoccupied with running a smooth school as an end in its own right. The humanitarian retains a concern for running a smooth school but strongly believes that developing effective interpersonal relationships is one important means to achieving student outcomes that are valued. Implementing district or commercial programs and guidelines effectively is a central procedure for goal achievement from the perspective of the program manager. Systematic problem solvers begin with a legitimate, comprehensive set of goals for students, and seek out the most effective means for their achievement. This sometimes means coming into conflict with district administrators if the principal believes that, in order to appropriately address the needs of students in his or her school, he or she must seriously explore better program alternatives than the ones proposed.

What we have described as differences in "levels of effectiveness" corresponds closely, in general orientation, to what other researchers have described as different styles of principal behaviour. For example, the "Initiator" style (Hall et al., 1984) closely resembles some of the practices described at the two highest levels in the Profile; this is particularly the case within the decision-making and strategies dimensions. Similarly, the "Manager" style (Hall et al., 1984) overlaps a number of practices placed at the second and third levels in the profile. Hall's "Reactor" style and the administrator level described here share a common orientation to school leadership. Such correspondences, found in other research on principals' style (Rutherford, 1983), increase the confidence that may be placed in the generalizability of our results. In comparison with research on styles, the Profile is more detailed in its description of practices. It also offers evidence that different "styles" may have quite different effects on schools, an issue most of those investigating principal styles have avoided.

1.4. A Conception of Effectiveness "In The Swamp"

Much less is known about how effective principals respond to poorly structured problems than about their responses to highly structured problems. This section provides a synopsis of selected work currently underway with the intent of extending knowledge in this area. In particular, Leithwood & Stager's (1986; 1987) recent findings are presented because they bear on the elements of unstructured problem solving and differences in such problem solving between moderately (non-expert) and highly (expert) effective principals.

The research summarized here has been carried out with small samples of Ontario elementary school principals using simulation, interview, and problem sorting methods of data collection. Principals were classified as moderately or highly effective based on a combination of reputational judgements by supervisory officers and Principal Profile ratings.

Figure 1-2: Growth in Principal Effectiveness by Level and Dimension

Level	Goals	Factors	Strategies	Decision making
4 (High) Problem Solver	• Selected from multiple public sources. • Highly ambitious for all students. • Transformed into short-term goals for planning. • Used to actively increase consistency among staff in directions they pursue.	• Attempts to influence all factors bearing on achievement. • Expectations within factors are specific. • Expectations derived from research and professional judgement.	• Uses a wide variety of strategies. • Criteria for choice include goals, factors, context, and perceived obstacles. • Makes extensive use of factor-specific strategies to achieve goals.	• Skilled in use of multiple forms; matches form to setting and works toward high levels of participation. • Decision processes oriented toward goals of education, based on information from personal, prof. and research sources. • Anticipates, initiates and monitors decision processes.
3 Program Manager	• Selected from several sources, some of which are public. • Particular focus on exceptional students. • Encourages staff to use goals for planning. • Conveys goals when requested or as particular need arises.	• Attempts to influence factors bearing on the school program. • Expectations within factors are specific. • Expectations are derived from personal and staff experiences and occasionally from research.	• Relies on limited number of established, well tested strategies. • Choice based on student needs (especially special students), desire to be fair and consistent, concern to manage time effectively. • Uses factor-specific strategies that are derived from personal experience and system direction.	• Skilled in use of several forms; selects form based on urgency and desire to involve staff. • Decision processes oriented toward school's program based on information from personal and professional sources. • Anticipates most decisions and monitors decision process regularly.
2 Humanitarian	• Derived from belief in the importance of interpersonal relations to effective school = happy school. • Goals may be ambitious but be limited in focus. • Goals not systematically used for planning. • Conveys goals to others if requested.	• Attempts to influence factors bearing on interpersonal relations. • Expectations within factors ambitious but vague. • Expectations are mostly derived from personal experiences and beliefs.	• Chooses strategies which focus on interpersonal relationships • Choice based on view of good school environment, view of own responsibilities and desire to make jobs of staff easier. • Makes little use of systemic factor-specific strategies.	• Uses primarily participatory forms of decision making based on a strong motivation to involve staff so they will be happy. • Tends to be proactive concerning decisions affecting school climate but largely reactive in all other areas unless required to act.
1 (Low) Administrator	• Derived from personal needs. • Focus on school administration rather than students. • Pursuit of instructional goals considered to be responsibility of staff, not principal. • Conveys goals to others if requested.	• Attempts to influence factors bearing on school appearance and day-to-day operations (mostly non-classroom factors). • Expectations within factors are vague. • Expectations are derived from personal experiences.	• Chooses strategies based on personal need to maintain administrative control and remain uninvolved in classroom. • Strategies mostly limited to use of vested authority and assist staff with routine tasks. • Attends to factor-specific strategies in a superficial way if required to do so.	• Uses primarily autocratic forms of decision making. • Decision processes oriented toward smooth school administration, based on personal sources of information. • Decision processes are reactive, inconsistent, and rarely monitored.

1.4.1. Problem-Solving Elements

A greater number of problem-solving elements has emerged from this research than was the case in research about effective responses to relatively well structured problems. These elements include:

- Interpretation: a principal's understanding of specifically what was the nature of the problem, often in situations where multiple potential problems could be identified
- Goals: the relatively immediate purposes that the principal was attempting to achieve in response to his or her interpretation of the problem.
- Principles: the relatively long-term purposes, operating principles, fundamental laws, doctrines, and assumptions guiding the principal's thinking
- Constraints: "immovable" barriers, obstacles, or factors severely narrowing the range of possible solutions the principal believed to be available
- Solution processes: what the principal did to solve a problem (in light of his or her interpretation of the problem, principles and goals to be achieved, and constraints to be accommodated).

1.4.2. Characteristics of Expertise

Within each of these elements of problem solving, clear differences are evident when highly and moderately effective principals are compared. In the case of problem interpretation, first of all, experts differ from non-experts in their ability to arrive at a clear comprehensive interpretation of a problem, one that would enable them to get on with the actual solution of the problem. Experts do not appear to become involved in considering irrelevant issues, and do not become dysfunctionally preoccupied with the feelings of others associated with the problem.

Second, principals' goal-related thinking suggests that experts as compared with non-experts pursue a broader range of goals and are more concerned with knowledge (their own and others') as distinct from feelings. They are also better able to see the implications, for students and for program quality, of problems which are not obviously or directly concerned with students or programs, and are in general more concerned about the balance among various goals.

Third, although not a great amount of data is available on "principles", they appear to constitute an important feature of administrators' problem solving, particularly that of experts, and one worthy of further attention. Fourth, experts do not typically identify any constraints, whereas many non-experts do. Factors that could be considered as constraints or obstacles by non-experts are viewed by experts simply as matters to take into account during problem solving; potential constraints are addressed through the solutions which they generated.

Experts and non-experts differ markedly, as well, in their solution processes. As compared with non-experts, the experts spend more effort in prior planning for the solution process and identify more detailed steps to be included in the process. Experts also consult others more about the solution and attempt to elicit widespread support for it. They stress the value of careful information collection as a part of the process. Experts show greater coherence or interrelatedness across all components than do non-experts. The source of such coherence often appears to be the principles evoked by the experts to guide their problem solving. When non-experts frequently interpret the problems more narrowly, the coherence that does exist is also across a more limited array of variables.

Finally, there are many differences among principals in their affect or apparent attitude as they approach and solve problems. Experts are invariably calm and relatively confident in their own abilities. Non-experts, especially in response to least structured problems, are sometimes fearful, often not confident, and occasionally somewhat belligerent and/or arrogant.

1.4.3. Expertise as Flexible Cognition

What has been described above as characteristic of effectiveness "in the swamp" is based on a very small body of evidence which must be viewed as quite tentative. With this caveat in mind, the evidence is made more plausible through its similarity to both theories and empirical results available from research on problem solving in domains other than school administration. In particular, it is useful to compare the results reported here to a conception of social cognition outlined by Showers and Cantor (1985).

The elements of "flexibility" in social cognition identified by these authors appear to be important dimensions of variation in the problem-solving processes of expert and non-expert principals. Furthermore, differences within the elements of motivation identified by Showers and Cantor provide plausible reasons for such variation in flexibility. From this perspective, principals' problem solving (especially that of experts) may be viewed as an effort taking place in "complex, personally involving contexts" (p.276), aimed at achieving a form of professional self-actualization.

Figure 1.3 identifies sources of motivation (goals, moods, and expertise) and shows their relationship to a person's actions, mediated by certain characteristics of thought. Based on their review of research on social cognition, Showers and Cantor (1985) claim that personal goals, mood states, and the amount of prior relevant knowledge or involvement in a task guide individuals' interpretations of a situation or problem and their plans for how to respond.

Motivational Elements	Flexible Cognitive Strategies	"Appropriate" Action
- Goals - Mood - Expertise	- Responsiveness to situations - Multiple interpretations - Active control -Change in repertoire	

Figure 1-3: Showers and Cantor's (1985) Explanation of the Relationship Between Sources of Motivation and Problem Solving

FLEXIBILITY

When events or situations engage a person's goals, moods, or expertise, people are capable of responding flexibly, that is, they are capable of:

> (a) adjusting their interpretations of the problem in response to situational features; (b) taking control of their thoughts and plans; (c) seeing multiple alternatives for interpreting the same event or outcome; and (d) changing their own knowledge repertoire by adding new experiences and by reworking cherished beliefs, values and goals (p.276).

Showers and Cantor point out that the preponderance of evidence about social cognition tends to emphasize the inflexible opposites of these cognitive strategies. People tend to cling to favourite interpretations and to lack metacognitive control. People also tend to become trapped by available stimuli into seeing only one interpretation of an event and to interpret existing knowledge rather passively.

Data concerning principals show evidence of variation in flexibility between experts and non-experts on several of these dimensions. For example, experts' concerns for collecting relevant information about unstructured problems indicate their willingness to respond to data about the situation and to adjust their interpretation of the nature of the problem. Many non-expert principals are unable to think of any recent problem that is novel or unique ("I sometimes say to myself, 'I was doing this exact same thing twelve years ago' ..."), whereas experts of comparable experience are quick to identify novel features of problems which demand some special attention, while still recognizing many familiar features.

Results concerning principals also demonstrate the willingness and ability of experts, in contrast to non-experts, to take control of their thoughts and plans. This is clear in the experts' careful "thinking through" of their solution processes and the detailed planning of the processes to be used in response to least structured problems; it is also clear in their thoughtful approach to reflection on a problem during interpretation. Non-experts frequently reject the value of reflection on a problem, preferring instead immediate "gut feeling" or intuitive responses.

Evidence of expert principals seeing multiple alternatives for interpreting the same event or outcome is suggested in data concerning constraints. Non-experts are often "bogged down" by their perceptions that constraints are immovable barriers and that there are no alternative ways to interpret or solve a problem. As a result, they have difficulty in attempting to reach a solution. Experts define constraints as sub-problems to be solved. They parcel off pieces of the problem, which they can control, hence interpreting the problem in a way that can lead to solution.

MOTIVATION

As the above discussion suggests, many of the differences between experts' and non-experts' responses to "least structured" problems appear to be explained by the extent of "flexible social cognition". Experts are highly flexible, non-experts much less so. The reasons for this, as Showers and Cantor argue, may be found among the differences in moods, goals, and expertise. Although there is not a large amount of relevant data, it is clear that expert principals approach problem solving in a positive, well-controlled affective state, usually characterized by feelings of self-confidence; non-experts frequently express mild frustration, fear, and some anxiety in their responses.

Showers and Cantor (1985) have concluded that positive moods (with "moods" being considered as "low level feeling states") have been linked to two kinds of flexibility: the ability to see multiple interpretations of a situation and to choose among them sensibly; and the ability to take control of the strategies one uses.

Both "principles" and "goals" (as relating to"long-term goals" and "short-term goals", respectively) are part of the concept "goal" used by Showers and Cantor. Expert principals identify and pursue a broader range of goals and are able to link short-term goals to their long-term concern for students and programs. Considerable evidence demonstrates the role of goals in organizing a person's use of existing knowledge and guiding the person's interpretations: the description of The Principal Profile (Leithwood & Montgomery, 1986) demonstrated that as principals' goals change, so do, for example, the factors in the school to which they are attentive, the strategies for influencing factors and the nature of their decision making. Showers and Cantor link goals to two types of flexibility in interpretation and planning: the adjustment of strategies to fit situations; and the construction of different strategies for behaviour as goals or knowledge changes.

The interpretation of Showers and Cantor's "expertise" construct is restricted to the amount of problem relevant knowledge available to the person. Expert principals demonstrate higher levels of

problem-related knowledge (e.g., anecdotes of success, as well as other chunks of information on which they can draw as a way of providing them with more options for both interpretation and solution processes); they also show greater availability of automatic responses to draw on when appropriate, thereby leaving more cognitive energy to devote to the truly problematic aspects of their situations.

In sum, "flexible social cognition" and the motivational elements which make it possible, appear to account for many of the findings on principals' problem-solving processes. How well the theory explains these processes requires further research, both to confirm existing matches between the theory and the data, and to explore areas in which the match is poor or unclear. At this point, it is, nevertheless, reasonable to speculate that "flexible social cognition" is made possible through the exercise of intellectual skills and predispositions which may be acquired: for example, a predisposition to distance oneself from the superficial features of a problem; the skill of articulation of one's problem solving practices and evaluation of their adequacy; the ability to identify problems that warrant significant planning and to take time for such planning; the ability to clarify one's beliefs, principles, and values and to use them explicitly in problem solving. Furthermore, the acquisition of skills such as these may be essential in order for principal-practitioners to hold "a reflective conversation with the materials of their situation" (Schön, 1987, p.6).

Chapter 2
Objectives for the Prototype Curriculum

The conception of effective practice and growth in such practice outlined in Chapter 1 is the source of objectives for the prototype curriculum. In this chapter, the full range of potential objectives to be achieved by a highly effective principal is outlined first. Since these objectives are much more extensive than what it is possible to accomplish in the time devoted to the prototype curriculum, the second part of this chapter indicates the subset of objectives that seem most relevant, given ministry guidelines for certification courses in Ontario.

2.1. Potential Objectives For "The High Ground"

Objectives identified in this section are derived from the conception of highly effective administrative practices on "the high ground" described in Chapter 1. These objectives are organized around each of the four main dimensions of practice: goals, factors, strategies, and decision making. Within each dimension, subdimensions are identified and the knowledge, skill, and affect (values, attitudes, dispositions, and the like) required for effective practice within each subdimension is described.

A detailed analysis of growth within each of these objectives would be of considerable value in curriculum design, but is beyond the scope of this project. An approximation to such an analysis is provided by the description of levels of principal effectiveness summarized in the previous chapter.

This dimension is concerned with the nature, sources, and uses of principal's goals.

2.1.1. Goals

1. Nature of goals - Knowledge: the principal---

    - understands what is meant by a "philosophy of education" and an "image of the educated person";
    - knows about the image of the educated person currently espoused by the Ministry of Education in Ontario;
    - understands the full set of educational goals associated with the image of the educated person currently espoused by the Ministry of Education in Ontario;
    - knows that achievement of the full set of educational goals by students requires experiences extending beyond those provided by the formal instructional setting;
    - knows about social, technological, educational, and other types of changes likely to affect educational goals and their achievement.
    - knows about contexts in which students will be expected to achieve educational goals.

2. Nature of goals - Skill: the principal ---

- is able to develop, with staff, a set of educational goals appropriate for the school and for individual students from the sources of educational goals;
- is able to establish priorities among the educational goals developed for the school and for individual students when necessary.

3. Nature of goals - Affect: the principal ---

- possesses an implicit or explicit philosophy of education and image of what it means to be educated;
- values the Ministry of Education's image of the educated person as worth working toward in his or her school;
- believes his or her goal is to provide the best educational experiences possible for the students the school serves (defined in terms of the MOE image);
- values all categories of goals associated with the image (including affective, skill, and knowledge goals);
- is receptive to changes which will help achieve valued educational goals;
- values goal setting as a means of assisting in goal achievement.

4. Sources of goals - Knowledge: the principal ---

- knows that potential sources of educational goals include the Ministry of Education, the local school board, needs of the community served by the school, and needs of individual students served by the school.

5. Sources of goals - Skill: the principal ---

- is able to readily locate all relevant sources of educational goals;
- is able to derive educational goals from all relevant sources;
- is able to help staff derive educational goals from all relevant sources.

6. Sources of goals - Affect: the principal ---

- attributes more legitimacy to public sources of educational goals (e.g. MOE, school board, community) than to personal or staff preferences when determining school goals.

7. Uses of goals - Knowledge: the principal ---

- knows that personally held goals are a central stimulus for an individual's actions.

8. Uses of goals - Skill: the principal ---

- is able to clarify his or her goals with staff;
- is able to achieve consensus among all or most members of staff about goals for the school;
- is able to clearly present the school goals to the entire school community including

students, parents, and other members of the community with an interest or stake in the school;

- is able to use the goals of education as the focus for all decisions, activities, planning, and evaluation.

9. Uses of goals - Affect: the principal ---

   - wants to have the school goals adopted as the basis for developing department/division goals and priorities.

   - values the development of staff consensus about educational goals as a means toward achieving goals.

2.1.2. Factors

There are three subdimensions of the dimension Factors: factors of most concern; nature of expectations held for factors; sources of expectations.

1. Factors of most concern - Knowledge: the principal ---

   - knows which factors are most likely to contribute to the achievement of the school's goals;

   - knows that all (18) factors are important to consider if the full set of school goals are to be approximated.

2. Factors of most concern - Skill: the principal ---

   - is able to establish priorities for immediate action among factors based on the condition of the factors and the characteristics of the school context;

   - is able to act on all factors in the classroom and school that need improvement over an extended period of time (e.g. 5 years).

3. Factors of most concern - Affect: the principal ---

   - is willing to set priorities among factors and to attempt to influence the condition of factors.

4. Nature of expectations - Knowledge: the principal ---

   - knows the conditions that must prevail within each factor if it is to make its greatest possible contribution to student growth.

5. Nature of expectations - Skill: the principal ---

   - is able to articulate expectations for the conditions within each factor in detail and in a way that most staff are able to readily understand;

   - is able to assist staff in clarifying the relationship between the current condition of each factor and the condition of each factor when it is making its greatest possible contribution to student growth;

   - is able to integrate information from several different sources in arriving at a warranted set of personal expectations for the conditions within each factor.

6. Nature of expectations - Affect: the principal ---

   - expects the school staff to improve the condition of each factor when the opportunity is available.

7. Source of expectations - Knowledge: the principal ---

   - knows about potential sources of information that may assist in forming valid expectations for the conditions to be achieved within each factor (e.g. consulting staff, personal experience, "experts" outside the school, research reports).

8. Source of expectations - Skill: the principal ---

   - is able to identify relevant sources of information about conditions within each factor;
   - is able to recover relevant information about the condition of factors from each source;
   - is able to accurately assess the validity of information recovered from each source.

9. Source of expectations - Affect: the principal ---

   - believes in the importance of basing his or her expectations for conditions within factors on the best possible sources of information.

2.1.3. Strategies

This dimension of principals' practices is concerned with the criteria principals use in choosing strategies, emphasis among strategies, and characteristics of strategies.

1. Criteria used - Knowledge: the principal ---

   - knows that strategies are means for influencing the condition of factors, not ends in their own right;
   - knows that the choice of a strategy depends on at least: the goal or concern; the factor to be influenced; characteristics of the people involved; other activities underway in parallel; school, school system norms; nature of obstacles to be overcome; relevant past experiences.

2. Criteria used - Skill: the principal ---

   - is able to choose the best strategy from among available alternatives using the criteria outlined (above);
   - is able to justify his or her choice of strategy, through reference to these criteria, to the satisfaction of almost anyone who requests such justification.

3. Criteria used - Affect: the principal ---

   - believes in the importance of and is willing to consider a complex set of criteria when choosing strategies;
   - resists pressure from others to choose alternatives using an unnecessarily restricted set of criteria.

4. Emphasis - Knowledge: the principal ---

    - knows about a large number of different strategies potentially useful in achieving school goals;
    - knows that a wide range of strategies may have to be used, in the long run, in order to achieve school goals.

5. Emphasis - Skill: the principal ---

    - [No skill in this subdimension.]

6. Emphasis - Affect: the principal ---

    - [No affect in this subdimension.]

7. Characteristics of strategies: Knowledge: the principal ---

    - knows about the characteristics of each strategy contributing to its impact.

8. Characteristics of strategies - Skill: the principal ---

    - is able to effectively execute a large number of different strategies when needed.

9. Characteristics of strategies - Affect: the principal ---

    - [No affect in this subdimension.]

2.1.4. Decision Making

There are six subdimensions included in decision making. They include:

- Forms and Procedures
- Attitude and Stance
- Monitoring
- Defining decisions and clarifying problems
- Criteria
- Use of information

1. Forms and procedures - Knowledge: the principal ---

    - knows about a range of different forms and procedures for decision making potentially relevant to the school;
    - knows about criteria that are relevant in selecting best form and procedure for decision making (including existing class practices, staff experiences, nature of goals, previous experience, type of decision);
    - knows about forms and procedures for decision making in use in departments/divisions in the school.

2. Forms and procedures - Skill: the principal ---

- is able to choose the best form and procedure to suit the conditions in the school and decision to be made;
- is able to create conditions in the school conducive to reasonably high levels of staff participation in decision making;
- is able to develop within departments/divisions forms and procedures for decision making compatible with those used at the school level;
- is able to assist staff in devising and using procedures that result in defensible decisions, whatever form the decision-making process takes;
- is able to establish procedures that ensure that decisions, which must be made at different levels in the school organization, are addressed when they need to be.

3. Forms and procedures - Affect: the principal ---

- values staff participation in decision making when possible;
- values the gradual development of consistent forms of decision making across all organizational units in the school;
- believes in varying decision-making forms and procedures to match the situation;
- values defensible decisions.

4. Attitude and stance - Knowledge: the principal ---

- understands that change is a continuous, gradual process.

5. Attitude and stance - Skill: the principal ---

- is able to anticipate most changes, the decisions that must be made, and problems to be solved in order to make progress in achieving goals;
- is able to influence the direction and nature of most change in the school.

6. Attitude and stance - Affect: the principal ---

- values decisions as opportunities to make progress in achieving goals and actively seeks out such opportunities;
- is receptive to change.

7. Monitoring - Knowledge: the principal ---

- knows that school decision-making processes must be monitored and refined continually if they are to become more effective.

8. Monitoring - Skill: the principal ---

- is able to collect and interpret information about school decision-making processes in terms of stakeholder satisfaction, needed resources, and effectiveness;
- is able to refine decision-making processes in response to such information.

9. **Monitoring - Affect: the principal ---**

   - **is willing to persist in monitoring and refining school decision-making processes and believes that this is important.**

10. **Defining decisions - Knowledge: the principal ---**

    - **knows that specific problems and decisions can and should usually be related to the goals of education for the school;**

    - **knows that it is important in effective decision making to address the causes of problems not just their symptoms.**

11. **Defining decisions - Skill: the principal ---**

    - **is able to see the relationship between specific problems/decisions and the goals of education;**

    - **is able to address specific problems in the context of school's overall mission;**

    - **is able to clarify most problems so that causes are identified and solutions can be found and implemented in the school;**

    - **is able to assist staff in departments/divisions to develop similar skill and knowledge.**

12. **Defining decisions - Affect: the principal ---**

    - **values the importance of identifying the causes of problems and the importance of viewing problems and decisions in the context of the school's goals.**

13. **Criteria used - Knowledge: the principals ---**

    - **knows that the goals of education are the basis for the most important criteria to be used in decision making.**

14. **Criteria used - Skill: the principal ---**

    - **is able to develop workable decision-making criteria from the goals of education for the school;**

    - **is able to assist staff in using such criteria at the division/department level.**

15. **Criteria used - Affect: the principal ---**

    - **believes in the importance of translating the school's goals into criteria for decision making.**

16. **Uses of information - Knowledge: the principal ---**

    - **knows about procedures for routinely collecting valid information relevant to school decisions;**

    - **knows about procedures for providing staff with information relevant to school decisions, which they will consider useful.**

17. **Use of information - Skill: the principal ---**

- is able to collect information of two types relevant to school decisions and make it available when decisions are being made:

  - general information about curriculum and education,

  - specific information relevant to the school context;

- is able to collect such information through both formal and informal means;

- is able to use information from different sources when making decisions;

- is able to monitor staff use of information in decision making and encourage better use of such information, when necessary.

18. Use of information - Affect: the principal ---

- values the use of all relevant information that can be practically collected in school decision making;

- believes in the importance of providing information to staff as a means of influencing staff decision making.

2.2. Potential Objectives For "The Swamp"

In this section, objectives derived from the conception of expert administrative problem solving "in the swamp" (Chapter 1) are outlined. These objectives are organized around each of the components of problem solving noted in Chapter 1, as well as more speculative associations with social cognition theory.

INTERPRETATION

The principal:

- is able to interpret problems in a form that allows them to be readily acted on;

- is able to discriminate relevant from irrelevant issues in problem clarification;

- is able to balance concerns and feelings of those involved in the problem against other types of information.

GOALS

The principal:

- identifies a comprehensive set of goals to be achieved;

- seeks out relevant knowledge in establishing goals;

- is able to detect implications for students and quality of programs in problems not obviously linked to students or programs;

- is concerned to achieve a balance among the goals to be achieved (e.g. for parents, staff, students).

PRINCIPLES

The principal:

- has a clearly defined set of principles, values, assumptions, and the like;
- is able to identify the values, principles, assumptions, and the like that are at issue in solving a particular problem;
- is able to determine the relationship between the nature of the problem and relevant principles, values, and assumptions.

CONSTRAINTS

The principal:

- is able to identify ways in which apparent constraints can be treated as subproblems in the problem solving process.

SOLUTION PROCESSES

The principal:

- is able to plan his/her solution processes in detail;
- wants to involve relevant others in designing a solution and generating support for it;
- is able to locate valid information and is predisposed to its collection.

OTHER

The principal:

- is able to bring coherence to all elements in the process;
- is confident about own abilities to solve problems and enjoys the process;
- is able to recognize both sources of novelty and sources of familiarity in problem settings;
- is able to see several possible interpretations of a problem;
- is able to actively control his/her own cognitive processes and mood.

2.3. A Choice of Objectives for the Prototype Curriculum

The choice of objectives for the prototype curriculum was made by considering (a) the emphases contained within the Ontario Ministry of Education's guideline governing certification courses, (b) advice from faculty in OISE's Educational Administration Department and a small group of principals, and (c) time available for implementing the curriculum. Results of applying these criteria are displayed in Table 2.1. In some cases, the objectives have been selected intact from those outlined above; in other cases objectives have been combined and extended. They are intended to be internally coherent and cumulative across a curriculum which is offered, as in Ontario, in two distinct parts (Part 1 and Part 2).

Table 2-1: Objectives for Parts 1 and 2 of the Model Curriculum

	Part 1		Part 2
	1. Images of the Effective Principal		
1.1	review alternative conceptions of the principal's and school's role	1.1	briefly review alternative conceptions of the principal's role; examine the historical evolution of the role and its significance for those presently in the role
1.2	examine data relevant to these conceptions	1.2	reassess own framework for thinking about the role
1.3	develop own framework for thinking about the role	1.3	briefly review selected parts of the Education Act and regulations as they bear on the principal's role, examine other relevant legal mandates (e.g., the Charter of Rights) influencing the principal's role
1.4	review selected parts of the Education Act and regulations as they bear on the principal's role	1.4	examine the meaning of professionalism as applied to teacher and principal roles and compare with meanings of the term used in other occupations
	Goals		
2.1	analyse Ontario's goals of education	2.1	briefly review Ontario's goals of education
2.2	compare the goals of education with objectives for selected courses in the intermediate and senior division, the Education Act, and other goals proposed for public education	2.2	compare the goals of education to objectives for selected areas of the primary and junior division program, the Education Act, and other goals for public education
2.3	identify potential discrepancies among such goals and objectives	2.3	know how to resolve conflicts among goals in an ethically defensible fashion
2.4	examine the principal's moral and ethical responsibilities in relation to educational goals	2.4	know how to communicate appropriate goals to school staff and build appropriate support among staff regarding school goals
2.5	know how to derive a set of educational goals suitable for a school given differences in religious, cultural, and racial contexts	2.5	know about and analyse broad social and educational policies affecting schools (e.g., OSIS, sexual equality)
2.6	know about and analyse broad social and educational policies affecting schools, their intent and substance (e.g., Bill 82, multiculturalism, bilingualism)		

Table 2-1 continued

Factors	
3.1 know about classroom factors (as distinct from school factors) potentially important in accounting for school effectiveness (e.g. instruction, time on task)	3.1 know about school-wide factors (as distinct from classroom factors) potentially important for accounting for school effectiveness (e.g. extracurricular activities school climate, student body composition)
3.2 know about the conditions within each factor that appear to have the most positive impact on student learning, taking into account such variables as area of study, level of difficulty, type of objective and type of student	3.2 know about the conditions within factors that appear to have the most positive impact on student learning, taking into account such variables as area of study, level of difficulty, type of objective and type of student
3.3 know how to select classroom factors most likely to facilitate student growth in relation to the goals of education	3.3 know how to select school-wide factors most likely to facilitate student growth in relation to the goals of education
3.4 know about the status of knowledge linking selected factors to student learning	3.4 know about the status of knowledge linking school-wide factors to student learning
	3.5 know how to use research and the experience of other professional staff in developing suitable expectations for factors
Strategies	
4.1 examine the ethical aspects of the principal's role as curriculum manager and agent of program change	4.1 examine the ethical aspects of the principal's role as evaluator of students, programs, and staff
4.2 know about the key problems and major pitfalls in the development and implementation of programs	4.2 know about the key problems and major pitfalls in the assessment of students, programs, and staff
4.3 know about a wide variety of strategies for influencing classroom factors, both "general-purpose" and "factor-specific"	4.3 know about a wide variety of "general-purpose" strategies for influencing school-wide factors
4.4 know how to use such "general-purpose" strategies as establishing routines, finding non-teaching time for staff; appropriate use of vested authority	4.4 know how to - develop satisfying and productive interpersonal relations among staff and students - interact effectively with the school's communities - develop and maintain useful school policies - ensure reasonable resource allocation to the school and appropriate distribution within the school

Table 2-1 concluded

Strategies cont.

4.5 know how to use such "factor-specific" strategies as goal setting, planning and curriculum development, class organization, program implementation, and providing support resources	4.5 know how to use at least one effective method for evaluating programs
	4.6 know how to use at least one effective method for supervising staff
	4.7 know how to work with other principals and school board staff to improve school programs

Decision Making

5.1 know about alternative models for school decision making	5.1 review alternative models of decision making
5.2 know how to refine decision problems, to clarify and analyse decisions, and distinguish the critical from the less critical	5.2 know about alternative forms of decision making and how to select a form suitable to the decision setting
5.3 know how to identify the criteria appropriate to a decision	5.3 know how to develop procedures in school for effective decision making
5.4 know how to make use of information from many sources in decision making	5.4 know how to monitor the process and consequences of decision making

Unstructured Problem Solving

The following objectives are to be included in both Parts 1 and 2 with problems of decreasing structure

The principal:

6.1 knows how to interpret problems in a form that allows them to be readily acted on;

6.2 is able to identify a comprehensive, balanced array of goals to be accomplished, including goals for students

6.3 is able to articulate own principles and values and use them explicitly during problem solving

6.4 knows how to locate relevant information and develop detailed plans for problem solving

6.5 is able to maintain a calm, self-confident mood during the problem-solving process

Chapter 3
The Basis for Instructional Strategies: A Model of the Learning Process

The prototype curriculum incorporates a number of instructional strategies that appear to be responsive to critical learning tasks faced by prospective participants. In this chapter, a model of learning is briefly outlined and, based on that model, a series of conditions for effective learning are identified. Chapter 4 demonstrates the relationship between such conditions and the instructional strategies included as part of the prototype curriculum.

3.1. A Model of Learning

The most direct source of the learning model outlined here is contemporary information processing theory. Such theory admits to no definitive formulation - especially briefly. It is still rife with unresolved problems, as one would expect of any field of study subject to the amount of current work characteristic of this one. Nevertheless the brief synthesis provided here[1] is generally consistent with more extensive formulations that are to be found, for example, in Shuell (1986) and Calfee (1981).

Contemporary accounts of information processing stress the goal-oriented nature of human functioning and describe mental structures and processes associated with the resolution of problems standing in the way of goal achievement. Three structures dominate this description and are particularly relevant to explanations of principal functioning: the Executive, Short-Term Memory (STM), and Long-Term Memory (LTM). The Executive is the primary location of both short- and long-term goals (or aspirations). Once perceived, information from the external environment is screened or assessed by the Executive to determine its relevance for goal achievement. Information judged to be irrelevant is given no further attention; if judged to be potentially relevant, information is passed on to STM. Beyond the limited processing space of STM and its capacity to integrate bits of information for treatment as a single piece, little is known about the functioning of STM. Its purpose, however, is to make sense of information passed on to it by the Executive. It does this by searching through the virtually unlimited storage space of LTM. Structurally, this space is represented as clusters or nodes of information, typically referred to as schemata, many of which are associated in networks, sometimes organized hierarchically. Relatively undemanding forms of sense-making take place when, through simple matching processes, (STM locates existing schemata or schematic networks capable of assimilating new information. More demanding forms of sense-making - for instance, problem solving - usually demand modification of existing schemata or schematic networks to accommodate novel aspects of information.

There is considerable debate about the nature of schemata. For present purposes, two distinct types are distinguished in LTM. "Knowledge schemata" encompass facts, concepts, principles, and personal

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[1] Adapted from Leithwood and Montgomery, 1986, pages 116-117.

theories as well as affective dispositions toward these elements. STM seeks out relevant schemata of this type in its attempts both to identify those elements or factors in the environment which influence goal achievement and to determine the conditions within each factor that must be met if goals are to be achieved. Having determined such conditions, action may be required to meet them. Actions are guided by "procedural schemata", structures which indicate how to act, the steps to take. Superordinate procedural schemata (sometimes called Executive Strategies), exist to coordinate highly complex sets of actions.

Knowledge structures or schemata become increasingly sophisticated as they are reorganized to incorporate additional pieces of related information and as the (sometimes hierarchical) associations among such schemata increase. Such sophistication is a function of active attempts to make meaningful more and more new information. And as new information is subsumed by existing knowledge schemata, the potential for meaningfully processing subsequent information increases. Actions become more skillful (effective) as procedural schemata become potentially more effective in accomplishing their ends, as overt behaviours reflect more accurately the image of skilled performance encapsulated in such schemata and as the use of procedural schemata becomes less conscious and more automatic. High levels of automaticity permit effective responses to environmental input without the need for processing such input through STM; this reduces response time and leaves the severely limited information processing space of STM available for handling other problems.

Information processing explanations of motivation begin with those internalized goals located in the Executive. People are normally motivated to engage in behaviours that they believe will contribute to goal achievement. Strength of motivation to act depends on the importance attached to the goal in question and judgement about its achievability. Motivational strength also depends on judgements about how successful a particular behaviour will be in moving toward goal achievement (Bandura, 1977).

An information processing view of the learning process is at the core of the model of learning underlying the prototype curriculum for school administrators. Nevertheless, there are two additional theoretical threads that serve not so much to add to this view of learning as to emphasize and highlight several of its features. The first such thread is social interaction theory (e.g. Simpson and Galbo, 1986): this theory stresses the dynamic nature of communication between people in the creation of personal meaning. Because each of those involved in communication actively brings different intellectual "histories" to bear in their attempts to construct such meaning, the outcomes of communication can never be entirely predetermined. This has significant implications for the role of instructor as well as for the choice of instructional techniques, elaborated more extensively in the next chapter. In brief, however, the implication is stated succinctly by Simpson and Galbo (1986) (although they have a normal classroom context in mind):

> The quality of a particular interaction is not entirely predictable, for the ultimate form is determined by the participants at the time of encounter -- [Instructors] must rely upon information gained through interacting with students -- to determine some of the ultimate specifics of instruction. Some parts of the instructional process may be directed more by the interaction of students and teacher than by the consciously determined behaviour of the teacher. The process is most useful in enhancing a carefully derived general lesson plan, especially in the hands of a superior teacher with very clear objectives in mind (pp. 49-50).

The position stresses the importance of interaction during learning, - not only between the learner and the formally designated instructor but with the learner's peers, as well.

A second theoretical thread is adult learning theory (e.g. Brundage and Mackeracher, 1980). While this is a highly derivative body of theory at present, it does provide a compelling argument for special

attention to the sheer extensity of the contents of adult learners' long-term memory in comparison with that of younger learners. This reservoir of knowledge, skill, and affect is at once a potentially vast resource for sense making and a relatively firm "substance" to modify and extend. Adult learning theory draws attention, as well to:

a. the relatively complex and richly integrated organization of the contents of long-term memory;

b. the relatively high ego investment of adult learners in their past experiences and accomplishments;

c. the relatively well established, clearly defined personal goals the adult learner brings to the educational experience.

As did social interaction theory, this position stresses the importance of interaction during learning. In addition, adult learning theory supports instructional strategies that allow learners a significant role in shaping the nature and direction of their own instruction.

3.2. Conditions For Effective Learning

While a model of learning, such as the one just outlined, is not synonymous with a model of instruction, its "implications" for instruction are relatively obvious and some have already been noted. In this section, 19 such implications are identified; they are conditions to be met by the array of instructional strategies discussed in Chapter 4. These conditions are loosely associated with the mental structures hypothesized by contemporary cognitive psychologists to account for mental functioning.

Instruction is increasingly effective to the extent that it:

3.2.1. The Executive

1. Provides opportunities for the learner to clarify goals to self and to the instructor;

2. Demonstrates relevance of new information to the learner's internalized goals;

3.2.2. Short-Term Memory

3. Helps the learner organize information into related "chunks" for more efficient processing;

4. Introduces new information to the learner in small, manageable increments;

5. Provides the learner with immediate opportunities for making links to contents of long-term memory;

3.2.3. Long-Term Memory - General

6. Diagnoses contents of the learner's long-term memory relevant to use in making sense of new information;

3.2.4. Long-Term Memory - Knowledge Schemata (Knowledge acquisition)

7. Assists the learner in matching new information with as many existing knowledge schemata as possible;

8. Assists the learner in expanding, modifying, or adapting existing schemata in order to make new information meaningful;

9. Assists the learner in linking together previously independent schemata in order to make new information meaningful;

10. When no relevant knowledge is stored in long-term memory, assists the learner to build new schemata and practise its retrieval;

3.2.5. Long-Term Memory - Procedural Schemata (Skill development)

11. Provides the learner with initial procedural schemata by modelling, verbal description, and the like;

12. Provides the learner with opportunities to act (perform) in accordance with initial procedural schemata;

13. Stimulates the learner to reflect on the discrepancies between his/her performance and his/her procedural schemata;

14. Provides the learner with feedback designed to increase the sophistication of procedural schemata and reduce the discrepancy between performance and procedural schemata;

15. Extends the learner's opportunities for practice with feedback until performance is sufficiently skillful;

3.2.6. Multiple Structures (Motivation)

16. Clarifies for the learner the relationship between new information and his/her own goals;

17. Formulates the goals for learning in a sufficiently incremental way that the learner sees their achievement as feasible;

18. Convincingly demonstrates the value of achieving the goals for learning as contributing to achievement of the learner's own, internalized goals;

19. Establishes a relationship between what is to be learned and stored knowledge and/or skill about which person feels positively.

3.3. Conclusion

The 19 conditions for facilitating learning allow for the development of effective responses to each of the four types of administrative problems discussed in Chapter 1. Their value in assisting participants to become skilled in the routine application of known procedures (the first problem type) seems obvious. Less obvious is their value in developing effective responses to the remaining types of problems. In these cases, what must be developed are complex, superordinate procedural schemata to guide the decision-making process and other more complex forms of problem solving. In addition, participants must learn to consciously control their own cognitive processes (metacognition) so that they may actively and flexibly reflect on the truly puzzling aspects of their environment. This appears to account for at least the types of

responses needed to both choose and develop problems and solutions from known alternatives (problem types two and three). The fourth type of administrative problem identified in Chapter 1, and the one most deeply submerged in the swamp, is "defining novel problems and creating solutions by combining previously unassociated ideas". Effective responses to this type of problem also appear to require high levels of metacognitive control. In addition, however, special emphasis would seem to be warranted on learning condition 9 -- assisting the learner in linking together previously independent schemata in order to make new information meaningful.

Chapter 4
Instructional Strategies for the Prototype Curriculum

This chapter addresses three components of instructional strategy. One component is the basic role of the instructor. Two different types of instructors are expected to be involved in implementing the curriculum -- practising school administrators and university faculty involved in research relevant to the principal's job. Their respective contributions are defined in terms of theory-practice relationships. A second component of instructional strategy examined is "techniques" of instruction, that is, specific procedures for organizing the participants' learning experiences and for facilitating participants' achievement of the curriculum's objectives. Third, brief but special attention is given to the nature and uses of a practicum experience as part of the curriculum. The final component is a schedule for instruction.

4.1. Instructor Roles

The "relevance" of the prototype curriculum depends on its objectives: to the extent that they reflect the knowledge, skills, and affect required for effective principal practice, the curriculum must be judged to be relevant. It is possible, however, for the substance of a curriculum for school administrators to be "relevant" to the job and yet the program still to suffer from lack of utility. Utility is a function of not only program objectives but also the nature of instruction designed to achieve those objectives.

Often, concerns about utility are expressed as excessive attention to theory and not enough concern for practice. More precisely, however, utility means "capable of being put to use". And while it is true that bad theory cannot be put to use with much advantage, good theory has great potential utility through its power to predict and control. This is especially so in otherwise highly uncertain environments like those inhabited by principals. Indeed, many principals have developed quite elaborate although often implicit theories-in-use, as Argyris (1982) would call them, to guide their work. Unpacking the meaning of utility in this way raises the questions: What is "good" theory from the perspective of the principal's job and How can the job be done more effectively? What can be done to ensure that the prototype curriculum as implemented reflects these features of good theory and is, thus, useful?

Part of the answer to this question about good theory is to be found in three features of some of those theories-in-use already guiding many principals. Such theories, first of all, are theories for action; they are designed for the purpose of prescribing what ought to be done in response to some administrative problem. By far the bulk of current, formal administrative theory has as its purpose description and explanation: this is a sometimes helpful but never sufficient basis for action. The objectives of the prototype program for the high ground, in contrast, are based on a theory for action, one which conceptualizes how principals can be effective in bringing about planned change. Second, theories-in-use have usually been subjected to considerable empirical verification, albeit a highly personal, unsystematic form of verification. While there is a long history of prescriptive theory in administration (theories for action), its empirical verification is woefully limited.

One response to the importance of basing the curriculum on verified theory has already been discussed: research which served as a source for the bulk of the curriculum's objectives for the high ground was well rooted in empirical data. This grounding, however, was necessarily limited to the sites in which data were collected. Extensive use of practising school administrators as program instructors is an additional form of verification. These instructors are able to relate the generalized theory for principal action to their own work and convey its utility, through interaction with participants, from that perspective; they are also able to supplement the generalized theory, when interaction suggests that is necessary, from the stock of their own professional experience.

The same response, having practising school administrators as instructors and co-developers of the program, is a way of recognizing a third powerful feature of principals' theories-in-use. Many principals' theories-in-use are sufficiently operationalized that their implications for application to specific administrative problems in each principal's own school context are extremely clear, at least to the holder of the theory. In contrast, much formal administrative theory is remote from specific action and often ambiguous in the guidance it provides for action in a particular context. Instructors need to be able to add specificity to the general theory for action guiding the course and help students make meaningful applications to their own context.

There is another side to the utility dilemma which cannot be adequately addressed simply by modelling the features of principals' implicit theories. While many educational programs have been accused of being "too theoretical", others have been described as trivial and mundane (the most common criticism levelled at Principal Certification programs in Ontario prior to about 1980). This criticism seems to mean there is an excessive focus on individual principals' espoused theories (Argyris, 1982). The value to others of such espoused theories depends on their congruence with theories-in-use; espoused theories which do not closely capture theories-in-use do not benefit from the empirical verification normally associated with theories-in-use.

The value of individual principals' espoused theories to others also depends on their external validity. Espoused theories of no demonstrable effect in multiple school contexts are probably of interest only to the espousers and their immediate families. The process used in both designing and implementing the prototype curriculum attempts not only to recognize but actively to foster productive tension between theory and practice. Researcher-participants are forced to clarify the meaning of their research in specific cases and contexts. Instructors are forced to examine the relationship between their theories-in-use (and espoused theories) and the general theory for principal action reflected in research-based descriptions of effective practice.

4.2. Instructional Techniques

There is little or no information concerned directly with effective techniques for instruction in pre-service, non-university, preparation programs for aspiring school administrators. On the other hand, most techniques found suitable in other adult learning contexts would appear to be suitable in the pre-service context, as well. A review (e.g. Sparks, 1983; Silver and Moyle, 1984; Hutson, 1981; Daresh and LaPlant, 1984) related to the pre-service and in-service education of teachers and administrators generated a significant number of promising instructional techniques. These techniques, potentially available to meet the learning conditions identified in Chapter 3, are as follows:

a. Opportunities for learners to identify some of their own needs and to participate in some program planning;

b. Lectures (giving information);

c. Private reading and reflection;

d. Independent study;

e. Demonstration of skills by "experts" (live, video);

f. Opportunities for practice and feedback (coaching);

g. Role playing;

h. Guided group discussion;

i. Case analyses;

j. Simulated case problem solving;

k. Site visits;

l. Participant presentations;

m. Opportunities for subgroup leadership;

n. Provision of individual diagnosis and counseling;

o. Clarification and extension of ideas with peers through discussion.

Figure 4.1 indicates which of these techniques seem most suitable in meeting each of the 19 learning conditions discussed in Chapter 3. Some of the attributes in Figure 4.1 are speculative and might change depending on more specific information concerning how the instructional technique is to be applied; a number of these techniques could be used with widely varying consequences. Nevertheless, the analysis does identify techniques of potential value in meeting many learning conditions, depending on just how they are used: guided group discussions and peer discussion are examples of such techniques. Learning conditions required for skill development (numbers 11-15) depend largely on the same cluster of techniques (e-l;).

Most of these techniques are probably better thought of as general approaches to instruction that can be further developed once one is clear about the curricular objectives to meet, some of the preferred learning styles of students, the amount of variety required to maintain energy and interest over the entire period of implementation, and the skills and preferences of instructors (although the selection of instructors should be done so as to avoid restricted choices of techniques for this reason). One set of promising choices of instructional techniques is evident in the sample timetable outlined in the final section of this chapter.

4.3. The Practicum

The practicum experience scheduled between Parts 1 and 2 of the prototype curriculum should accomplish three general purposes. First, it should assist participants in refining the decision-making and more complex problem-solving schemata required for the effective use of well developed procedures in the contingent world of the schools. This purpose will be accomplished to the extent that the practicum instructor (e.g., an experienced principal) models, provides opportunities for practice, and gives feedback to the participants about their decisions and decision processes. Second, the practicum instructor may further develop the procedural knowledge that participants bring to the practicum situation and extend the repertoire of procedures possessed by them. Both these purposes are possible in the practicum to the extent that effective procedures and problem-solving processes can be made relatively explicit.

Figure 4-1: Instructional responses to each of the basic conditions for learning

Learning Conditions	a. Own Needs	b. Lectures	c. Readings	d. Independent Study	e. Demonstration	f. Coaching	g. Role Playing	h. Group Discussion	i. Case Analysis	j. Simulation	k. Part. Present	l. Subgroup Leadership	m. Diagnosis	n. Site Visits	o. Discussion
1. Clarity of goals	√			√				√			√		√		√
2. Relevance of goals		√		√				√							√
3. Help in chunking		√													√
4. Small increments	√		√	√				√					√		
5. Help in linking								√	√					√	√
6. Diagnosis	√												√		√
7. Help in matching		√	√						√	√					√
8. Help in modifying		√	√	√				√							√
9. New networks								√	√						√
10. New schema		√	√	√				√							√
11. Initial proced. schema					√									√	
12. Performance						√	√		√	√	√	√			
13. Discrepancies					√	√		√					√		
14. Feedback					√	√	√	√	√	√	√	√			
15. Extensive practice						√	√	√	√	√	√	√			
16. New learning & goals	√	√		√				√					√		
17. Achievable goals		√						√						√	
18. Effective actions								√						√	
19. Positive feelings	√							√						√	√

The third purpose, while more difficult to accomplish, is a traditional expectation for practicum experiences in other types of education for practice. Such experiences include the clinical work of medical interns under the guidance of a senior practitioner, the articling experience of the novice lawyer, and apprenticeship activities associated with skill development in the fine arts and in craft-based vocations. These practica share in common the goal of acquiring the more tacit components of the experienced practitioner's repertoire of knowledge and skill -- those components that permit such practitioners to deal effectively with problems "in the swamp" or "situations of uncertainty, uniqueness and conflict" (Schön, 1987, p.16).

Schön (1987) accounts for the "artistic aspects of practice" by reference to this tacit knowledge and skill. He suggests that these aspects of practice are acquired in professional studios and conservatories by creating certain necessary conditions which he identifies (after Dewey) as the :

> ... freedom to learn by doing in a setting low in risk, with access to coaches who initiate students into the traditions of the calling and help them by the right kind of telling to see on their own behalf and in their own way what they need most to see (p.17).

What does this view of a practicum mean in the context of a principal certification program? To accomplish the three general purposes discussed above, the practicum included in the prototype curriculum will:

1. provide a significant portion of time to observe an experienced principal at work on a range of non-trivial problems and to discuss with that principal her intentions, how she links her overt actions to those intentions and how she manages her problems;

2. provide an opportunity for the participant to become involved in an administrative problem on the high ground with close coaching from an experienced principal. This coaching is intended to foster what Schön (1983) refers to as "reflection-in-action" in order to refine procedural knowledge and problem-solving processes;

3. provide an opportunity for the participant to become involved, with an experienced principal, in an administrative problem in the swamp. Frequent discussion of the process used by the experienced principal and implications for solving other problems should foster reflection-on-action, to use Schön's (1983) term.

4.4. Schedule For Instruction

Many effective combinations of instructional strategies are possible. This is clear from comparisons of existing certification programs and their effects. In this section, one such combination is provided in order to give the reader a more specific understanding of what is possible. Illustrative instructional schedules are outlined for prototype Part 1 (Figure 4.2) and Part 2 (Figure 4.3). These schedules are similar in structure and content to the schedules actually used by the Centre for Principal Development in its certification courses.

Parts 1 and 2 (Figures 4.2 and 4.3) are organized on a weekly cycle. This cycle assumes some time spent together as a whole group and some time in small "home groups" as well as time spent independently. With some adaptations, these cycles correspond to the major categories of objectives outlined in Chapter 2 modified by the special emphasis in each part. Within most of the weekly cycles there are typically ten instructional techniques used:

- opportunities to identify own needs and plan program: this occurs through contribution to evaluation, program, and social committees. Each participant is a member of one such committee;

- lectures: offered by guest speakers from the centre, Ministry of Education, school systems, and other agencies;

- private reading and reflection: from a course text along with individual paper selected by course staff;

- demonstration of skills: this occurs through guest demonstrators and the use of video materials;

- opportunities for practice and feedback: home group context;

- role playing: occurs as participants assume leadership roles in small groups, conduct simulated interviews, and the like;

- guided group discussion: home group leaders facilitate such discussion as participants address issues raised by speakers, readings, and other stimuli; teleconference discussions with "experts" in various areas are also used;

- simulated case problem solving: case problems provide a focus for participant to integrate information from a variety of sources;

- participant presentations: solutions to case problems are presented to other course participants;

- peer discussion: carried out in home groups and in less formal contexts.

All readings should be accompanied by a brief synopsis and an indication of the program objectives to which they are relevant. Guest speakers should be briefed in advance concerning the purposes they are to serve. Participants should be encouraged to interact with these speakers around such purposes, as well as other matters which emerge spontaneously. Resident speakers serve the functions of the rationalizing framework for the program, placing the activities for each week in the context of the overall program purposes and helping participants make effective use of the text and other reading material.

The participants in each part are divided into "home groups". Each is assigned a program staff member. The groups should usually meet each day for several purposes: staff members should provide some direct instruction in these sessions and facilitate discussion and application of speaker presentations and readings. Participants should also carry out some of their project work (case problem solving) in subgroups in the home group context. Discussions in these sessions should not be rigidly prescribed and should offer an opportunity for special interests of candidates to be pursued.

Each part is to be staffed by four instructors and a principal. The principal is responsible for planning the program, hiring program instructors and day to day administration of the course.

The purposes and procedures associated with the practicum were discussed earlier. Candidates should initiate the practicum by proposing a project to Part 1 staff; they have an opportunity to refine the focus of their project with staff help during their participation in Part 1, as well as to arrange for approval of the project in their school or school systems. Projects should usually be part of the necessary tasks to be carried out within a school. Examples of projects that might be relevant are:

- The implementation of a new writing guideline for the intermediate division;

- Transition from a non-semestered to a fully semestered secondary school;

- Strategies for assisting teachers in implementing thinking skills curricula;

- Improving communication between school and community

During implementation of the practicum, participants should normally meet at least every two weeks with a local advisor (often their own principal) to discuss progress and receive advice.

Figure 4-2: Principal Certification Course -- Part 1, 1987
Ontario Institute for Studies in Education

Week 1 The Purpose of the Schools & The Role of the Principal

Monday July 6	Tuesday July 7	Wednesday July 8	Thursday July 9
8:30 Registration & Opening Ex. -introductions -procedures -programme -evaluation -assignments	8:00-9:15 Home Group Teleconf. prep. 9:30 Teleconference Sean Conway	8:00-9:15 Home Group	8:00-9:15 Home Group
9:00-10:00 Keynote ERGO	11:00 Home Group -reaction to plenary	9:30 Committee formation & 1st meetings	9:30 Plenary Bob Williams Working With School Objectives
10:00 Home Group	12:15 Plenary & Home Group -work sessions to plan assignments	10:30 Plenary Duncan Green Goals of Ed.	11:00 Home Group -school goal setting activity
11:00 Plenary Ken Leithwood	1:30 Individual and group projects	12:00 Home Group -reaction to plenary	12:15 Home Group -summary of the week -evaluation
12:15 Home Group -reaction to plenary		1:30 Individual and group projects	1:00 Individual and group projects
1:30 Individual and group projects			

Figure 4-2, continued

Week 2 Factors Which Bear on the Achievement of Educatonal Goals

Monday July 13	Tuesday July 14	Wednesday July 15	Thursday July 16
8:00 Plenary -evaluation of week 1 -introduce new theme	8:00-9:15 Home Group 9:00 Plenary The Practicum Carole MacPhee	8:00-9:15 Home Group teleconf. prep. 9:00-10:45 Plenary Staff forum	8:00-9:15 Home Group 9:15-10:30 assignments 10:30 Plenary Gerry Smith
8:30 Home Group -assignment	9:30 Exchange of practicum information with Part 2 (2 sessions)	11:00 Plenary Teleconference Donald Schön	12:00 Computer Hands-on Sessions (4)
10:00 Plenary P. Begley Factors	11:00 Plenary Frank Clifford	12:30 Home Group	1:00 Individual and group projects
11:15 Plenary Panel of Practitioners -factors	12:30 Home Group -prepare for teleconference	1:30 Individual and group projects	Social
12:30 Home Group	1:30 Individual and group projects		
1:30 Individual and group projects			

Figure 4-2, continued

Week 3 Strategies As Aids to Principal Effectiveness

Monday July 20	Tuesday July 21	Wednesday July 22	Thursday July 23
8:00-9:00 -introduce new staff -evaluation of week 2 -introduce new theme -distribute materials	8:00-9:15 Home Group	8:00-9:30 Home Group	8:00 Plenary Mock Interviews -prep. ques. & candidates -interviews
9:00-12:00 Plenary K. Leithwood SIP Procedures	9:30 Plenary Ed Hickcox School Level PAS	9:45-11:15 Staff Concurrent Workshops	12:00 Home Group
12:15 Home Group -reaction to plenary	11:00 Staff Forum PAS practices	11:30 Plenary Cecilia Reynolds	1:30 Social
1:30 Individual and group projects	12:15 Home Group	12:30 Home Group & assignments	4:00 Individual and group projects
	1:30 Individual and group projects	1:30 Individual and group projects	

Figure 4-2, concluded

Week 4 The Decision-Making Process

Monday July 27	Tuesday July 28	Wednesday July 29	Thursday July 30
8:00 Plenary -evaluation of week 3 -introduce new theme	8:00-9:15 Cand. Pres. 9:30-10:30 Plenary Federation Panel 10:45-12:00 Cand. Pres. 12:00 Home Group	8:00-9:00 Home Group 9:15-10:30 Candidate Presentation 10:45-12:00 Candidate Presentations 12:15 Home Group	8:00-9:15 Home Group 9:30 P. Angelini Situational Leadership 11:30 Home Group 12:30 Course Finale -Program Committee
8:30-9:45 Home Group			
10:00 Plenary K. Leithwood Decision Making	1:30 Individual and group projects	1:30 Individual and group projects	
11:30 Plenary Staff Panel -Decision Making			
12:30 Home Group			
1:30 Individual and group projects			

Figure 4-3: Principal's Course - Part 2 - 1987
Ontario Institute For Studies In Education

Week 1

Theme: THE PRINCIPAL AS PROBLEM SOLVER

Wednesday July 2	Thursday July 3	Friday July 4	Monday July 7
8:30 - 10:00 -Registration Plenary - Course Opening	8:00-9:30 Plenary Dr. K. Leithwood -Overview of Part 1 -Lead in to theme for this week -Problem-Solving Process	8:00 - 9:30 Home Group Entry Plan	8:00 - 9:30 Home Group Pose question from Day 1 Reaction to articles Connection of Entry Plan to effective schools to principal profile
10:00-10:45 Home Group		9:30 - 10:15 Break	
10:45 - 11:00 Break		10:15 - 12:30 Entry Plan - continues	9:30 - 10:30 Plenary Carol Matheson
11:00 - 12:30 Plenary Guest Speaker Em Lavender	9:30 - 10:00 Break	-Group Exchange begins	10:30 - 11:00 Break
12:30 - 1:30 Home Group Follow up to plenary -Characteristics of Effective Schools	10:00 - 11:30 Home Group reaction to Speaker Follow up to questions Re: Effective Schools	12:30 - 1:30 Home Group -Reaction to Entry Plan -Distribution of Articles	11:00 - 1:30 Home Group Follow up to Plenary Dialogue - Feedback from candidates Summary of Week 1 Closing Activity
Program Overview, -Theme for this week -Assignment - Question	11:30 - 12:00 Break		
	12:00 - 1:00 Home Group Introduction to "Entry Plan"		
	1:00 - 1:30 Committee Formation		

Figure 4-3, continued

Week 2

Theme: THE PRINCIPAL AS PROGRAM MONITOR

Monday July 8	Wednesday July 9	Thursday July 10	Friday July 11
8:00 - 8:30 Milree to Whole Group	8:00-9:00 Home Group- A principal's beliefs and values as they relate to program evaluation	8:00-9:30 Workshop Activity Group will be divided. Elementary and Secondary	8:00 - 9:30 Workshop Activity Group Divided Elem. Secondary
8:30 - 9:45 Home Group	9:00 - 9:30 Break	9:30 - 10:00 Break	9:30 - 10:00 Break
9:45 - 10:10 Break	9:30 - 11:00 Home Group preparation for John Goodlad Reference - Article from his book "A Place Called School"	10:00 - 11:15 Speaker - Duncan Green Topic: How does the ministry monitor, collect data, and review program implementation	10:00 - 11:30 Home Group Session
10:10 - 11:30 Home Group Time in Preparation for Ken's Prest'n	11:00 John Goodlad to whole group (Tele- communication)	11:15 - 12:30 Break	11:30 - 12:00 Break
11:30 - 12:30 Ken Leithwood	12:00 - 1:30 Home Group discussion and follow up to John Goodlad	12:30 - 2:30 Workshop Activity Group will be divided elem./ secondary	12:00 - 1:00 Home Group Summary
12:00 - 12:30 To whole group "Model for prog. Eval'n" Reference - Principal Profile		2:30 - 4:00 Social Function	
12:30 - 1:30 Home Group discussion on Ken's prest'n			

Figure 4-3, continued

Week 3

Theme: PRINCIPAL AS STAFF SUPERVISOR

Monday July 14	Tuesday July 15	Wednesday July 16	Thursday July 17
8:00 - 9:00 - Introduction "The Role of Principal" The Effective School. Presentation by Milree and Instructors Week 3 and 4	What is Effective Teaching? 8:00 - 9:30 Home Group	"Evaluation Models" - Effective Skills for Principal 8:00 - 9:30 - Home Group Analysis of Back Home Models	Skills Required Where do we go from here? What do you do with the evaluation? 8:00 - 10:00 Workshops Skills/Processes
9:00 - 11:00 - Home Group Intro. Needs Assessment Assign. Getting to know you	8:30 - 9:30 - Home Groups Observation Criteria 9:30 - 11:00 "Evaluation Criteria" Speaker -	9:30 - 10:30 Speaker - Milree What does research say?	10:00 - 11:00 Home Group Follow up Skill 11:00 - 12:00 Speaker -
11:00 - 12:30	11:00 - 1:30 - Establishment of Criteria with staff acceptance	10:30 - 11:30 - Home Group	Adult Education Effective Staff Development Co-operative Planning
12:30 - 1:30 Home Group	1:30 Individual and Group Projects	11:30 - 1:30 "Principal as Instructional Leader" Speaker - Chris Bridge	12:00 - 1:30 Small Group
1:30 Individual and Group Projects		1:30 Individual and Group Projects	1:30 Individual and Group Projects

Figure 4-3, continued

Week 4

Theme: PRINCIPAL AS STAFF DEVELOPER

Monday July 21	Tuesday July 22	Wednesday July 23	Thursday July 24
Staff Development Plan Follow-Up to Evaluation 8:00 - 8:30 - Looking Ahead - Milree 8:30 - 11:00 - Home Group Develop - Staff Develop. Plan 11:00 - 12:30 - Staff Development - Secondary - Elementary 12:30 - 1:30 - Home Group 1:30 Individual and Group Projects	Morale and Motivation 8:00 - 10:00 - Home Group Problem/Issues Staff Development 10:00 - 11:30 - Speaker - Jean Wettlaufer - Peer supervision 11:30 - 1:30 - Home Group - Discussion of reading - Follow up 1:30 Individual and Group Projects	Career Planning/ Leadership Development Equal Opportunity 8:00 - 10:30 - Home Group Staff Development Plans 10:30 - 12:00 Speaker - Affirmative Action 12:00 - 1:30 Career Planning - Principal's Role 1:30 Individual and Group Projects	Candidates Plan This Day

Chapter 5
Instructional Materials for the Prototype Curriculum

Listed in this chapter are different types of readily accessible resources that would be potentially useful in accomplishing the objectives for the curriculum. These resources are listed in three major categories: materials of general value across many course objectives; materials specifically useful in accomplishing objectives for "the high ground"; materials to help develop effectiveness "in the swamp".

5.1. Materials of General Value

These materials are of 3 types: texts or otherwise comprehensive views of the role and/or tasks associated with the role; audio and audiovisual material helpful in providing students with some insights; and case studies of principals at work. For the most part, each text adopts a perspective on the principalship which is somewhat unique. The cases may be used to illustrate aspects of typical and effective practice.

Texts (Published since 1980)

Blumberg, A.; Greenfield, W. (1980). *The Effective Principal*. Boston: Allyn & Bacon.

Day, C.; Johnston, D.; Whitaker, P. (1985). *Managing Primary Schools: A Professional Development Approach*. London & New York: Harper & Row.

Duke, D.L. (1987). *School Leadership and Instructional Improvement*. New York: Random House.

Everard, K.B.; Morris, G. (1985). *Effective School Management*. London: Harper & Row.

Glasman, N.S. (1986). *Evaluation-Based Leadership*. New York: State University of New York Press.

Hegarty, S. (Ed.) (1982). *Training For Management In Schools*. Windsor, U.K.: NFER-Nelson.

Hoyle, J.R.; English, F.; Steffy, B. (1985). *Skills For Successful School Leaders*. Arlington, VA.: American Association of School Administrators.

[1]Leithwood, K.A.; Montgomery, D.J. (1986). *Improving Principal Effectiveness: The Principal Profile*. Toronto: OISE Press.

Leithwood, K.A.; Rutherford, W.; van der Vegt, R. (Eds) (1987). *Preparing School Leaders For Educational Improvement*. London: Croom-Helm.

Lipham, J.M.; Rankin, R.E.; Hoch, J.A. (1985). *The Principalship*. New York: Longman.

Morris, U.C. et al. (1984). *Principals in Action: The Reality Of Managing Schools*. Columbus: C.E. Merrill.

[1]This is the only text which adopts a Canadian perspective on the role. The remainder are American and U.K. in orientation but useful nonetheless.

Roe, W.H.; Drake, T.L. (1980). *The Principalship: 2nd Edition*. New York: Macmillan Pub.

Simpkins, W.S.; Thomas, A.R.; Thomas, E.B. (Eds) (1982). *Principal and Task: An Australian Perspective*. Armidale, N.S.W.: University of New England.

Case Studies

Blumberg, A.; Greenfield, W. (1980). *The Effective Principal*. Boston: Allyn & Bacon.

Case Studies. (1986). Vancouver, B.C.: Prepared by the British Columbia Trustees Association.

Dwyer, D.C., et al. (1983). *Five Principals In Action: Perspectives On Instructional Management*. San Francisco: Instructional Management Program, Far West Laboratory For Educational Research and Development.

Lightfoot, S.L. (1983). *The Good High School*. New York: Basic Books.

Wolcott, H.F. (1978). *The Man In The Principal's Office*. New York: Holt.

Audio and Audiovisual Material[2]

The Principal as Program Leader, Videotape prepared and distributed by the Association for Supervision and Curriculum Development, Alexandria, Virginia, 1985.

RT 1933 Liberty and equality in educational finance

RT 1520 Educational administration - a forty year perspective

RT 1860 Managerial leadership in the future

RT 467 The kind of schools we need

RT 2041 Can principals be trained to be instructional leaders?

RT 2033 Critical issues facing middle level education: symposium

RT 2047 Ideal characteristics of a middle level school

RT 2089 Instructional management: how you can provide leadership for school improvement

RT 2091 The leadership role of the middle level principal

RT 2085 Making it as an instructional leader

RT 2038 The one parent family: what this growing trend means for principals and schools

RT 2021 Planning for school improvement

RT 2018 The principal as curriculum leader - reality vs myth

RT 2092 Stress and self-renewal of the principal

RT 2086 What makes an "Effective Principal", a follow-up of the NAASP senior high principalship study

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[2] All references preceeded by a letter and number code are available through the OISE library using that code.

5.2. Materials To Help Accomplish Objectives For "The High Ground"

These materials are organized around the four problem-solving components (Goals, Factors, Strategies, Decision Making) discussed in Chapter 1 as part of what is required for principals to be effective on the high ground.

GOALS

Goals of Education: Official[3]

Government of Ontario. *The Education Act*: 1986

Government of Ontario. *Regulation 262*: 1986

Green D. *Ontario's 13 Goals of Education.* (An audiotaped presentation). Toronto: OISE, Summer 1986.

Ontario. Ministry of Education: *Issues and Directions: The Response to The Final Report of the Commission on Declining School Enrolments in Ontario.* June, 1980.

Ontario. Ministry of Education: *Ontario Schools: Intermediate and Senior Divisions: Program and Diploma Requirements 1984.* (OSIS).

Principals' Goals

See General section (Texts), Leithwood and Montgomery (1986).

See General section (Audiovisual) The Principal as Program Leader (section on "Vision").

STRATEGIES

Fullan, M.K.; Park, P. (1982). *Curriculum Implementation.* Toronto: Ministry of Education, Ontario.

Howey, K.R.; Vaughan J.C. (1983). Correct patterns of staff development. In *Staff Development.* National Study for the Study of Education.

Leithwood, K.A., with M. Fullan and G. Heald-Taylor. (1987). *School Level CRDI Procedures to Guide the School Improvement Process.* Toronto: OISE Press.

Leithwood, K.A. (Ed.) (1986). *Planned Educational Change: A Manual of CRDI Concepts and Procedures.* Toronto: OISE Press.

Leithwood, K.A.; Montgomery, D.J. (1986). *Improving Classroom Practice Using Innovation Profiles.* Toronto: OISE Press.

Lieberman, A.; Miller. L. (1986). School improvement: Themes and variations. In A. Lieberman (Ed.), *Rethinking School Improvement.* New York: Teachers College Press.

MacKeracher, D. (1984). *The Nature of Adult Learning: Implications for Planning and Implementing Programs.* Toronto: OISE Press.

McLaughlin, M.W. (1986). Teacher evaluation and school improvement. In A. Lieberman (Ed.), *Rethinking School Improvement.* New York: Teachers College Press.

Stiggins, R.J. (1986). *The Case for Changing Teacher Evaluation to Promote School Improvement.* Portland, OR: Northwest Regional Educational Laboratory.

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[3] All recent Ontario curriculum guidelines also may be viewed as sources of such goals.

RT 815 Alternative models for use in designing teacher evaluation systems

RT 1365 Program evaluation when? how? to what ends?

RT 2034 Better learning in secondary schools through more effective use of computers

RT 2017 Building confidence in schools: a principal priority

RT 2063 Clinical supervision strategies

RT 2044 Curriculum as a strategic management tool

RT 2072 Cutting administrative time task through effective use of your microcomputer

RT 2071 Directions and dimensions of parent involvement: what to do when the doughnuts get stale

RT 2046 Evaluation - your key to improving learning

RT 2073 How to help the marginal or failing teacher

RT 2039 Improving teacher performance through evaluation and supervision

RT 2035 Managing interpersonal and organizational conflict

RT 2022 Microcomputers in school management and curriculum

RT 2078 Monitoring students' academic and disciplinary progression

RT 2064 Practical PR tips that work for building administrators

RT 2081 The principal and the due process hearing when terminating the tenured teacher

RT 2076 The principal: key to building public confidence in schools

RT 2074 The principal - time on task

RT 2060 Providing high quality learning time for middle level students

RT 2031 Public relations ideas that work in schools

RT 2038 Public relations principles for principals of larger schools

RT 2065 Recent research on learning styles and practical implications for principals and teachers

RT 2095 School climate: creating an environment for quality education

RT 2036 Teacher incentives: what works

RT 2024 Teacher motivation: getting teachers up when the job is getting them down

RT 2098 What research tells the principal about effective instruction

RT 2087 What research tells the principal about learning styles

FACTORS

Anderson, L.W.; Brinlee, P.S. (1982). Teacher transitions: Another look. University of South Carolina. Paper presented at the annual meeting of AERA in New York.

Anderson, L.W. et al. (1980). Dimensions of classroom management derived from recent research. *Journal of Curriculum Studies*. 12 (4), 342-356.

Anderson, L.W. et al. (October, 1978). The first grade reading group study: Technical report of experimental effects and process-outcome relationships. Research and Development Report No. 4070. Austin, Texas: Research and Development Center for Teacher Education, The University of Texas at Austin.

Arehart, J.E. (1979). Student opportunity to learn related to student achievement of objectives in a probability unit. *Journal of Educational Research*. 72 (5), 253-259.

Ausubel, D.P. (1978). In defence of advance organizers. *RER*. 48 (2), 251-258.

Baker, E. et al. (1981). Fun and games: Their contribution to basic skills instruction in elementary school. AERJ. 18 (1), 83-92.

Bangert, R.L. et al. (1983). Individualized systems of instruction in secondary schools. *RER*. 53 (2), 143-158.

Beckerman, T.M.; Good T.L. (1981). The classroom ratio of high and low aptitude students and its effect on achievement. *AERJ*. 18 (3), 317-327.

Bennett, W.J. (1986). *What Works: Research About Teaching And Learning*. Washington: United States Department of Education.

Bloom, B.S. (May, 1984). The search for methods of group instruction as effective as one-to-one tutoring. *Educational Leadership*. pp.4-17.

Brookover, W.B. et al. (1977). Changes in school characteristics coincident with changes in student achievement. College of Urban Development of Michigan State University and the Michigan Department of Education.

Brophy, J. (1982). Successful teaching strategies for the inner-city child. *Phi Delta Kappan*. 63 (8), 527-530.

Brophy, J.E.; Evertson, C.M. (1976). *Learning From Teaching*. Boston: Allyn & Bacon.

Centra, J.A.; Potter, D.A. (1980). School and teacher effects: An interrelational model. *Review of Educational Research*. 50 (2), 273-291.

Clauset, K.H., Jr.; Gaynor, A.K. (1981). The dynamics of effective and ineffective schooling: Preliminary report of a system dynamics policy study. Paper presented at the annual meeting of AERA, Los Angeles.

Cohen, M. (November, 1982). Effective principals. *The School Administrator*. 39, 14-16.

Corno, L. et al. (1981). The influence of direct instruction on student self appraisals: A hierarchical analysis of treatment and aptitude-treatment interaction effects. *AERJ*. 18 (1), 39-61.

Cronbach, L.J. (1967). How can instruction be adapted to individual differences? In R.M. Gagne (Ed.) *Learning and Individual Differences*. Columbus, Ohio: Merrill.

Edmunds, R. (1979). Effective schools for the urban poor. *Educational Leadership*. 37, 15-18, 20-24.

Emmer, E.T. (July, 1982). Management strategies in elementary classrooms. Research and Development Report No. 6052. Research and Development Center for Teacher Education, University of Texas at Austin.

Evertson, C.M.; Brophy, J.E. (undated). The Texas teacher effectiveness questionnaire and interview. Data report No. 74-5. Research and Development Center for Teacher Education, University of Texas at Austin.

Evertson, C.M. et al. (1982). Improving classroom management: An experiment in elementary classrooms. Research and Development Center for Teacher Education, University of Texas at Austin. Paper presented at the annual meeting of AERA, New York.

Evertson, C.M. et al. (1981). Effects of class heterogeneity in junior high school. *AERJ*. 18 (2), 219-232.

Evertson, C.M. et al. (1980). Relationship between classroom behavior and student outcomes in junior high mathematics and English classes. *Educational Research Journal*. 17 (1), 43-60.

Evertson, C.M. et al. (1978). Process produced relationships in the Texas Junior high school study: Compendium. Research and Development Report No. 4064. Presented at the annual meeting of the AERA, Toronto, 1978.

Frederick, W.C.; Walberg, H.J. (1980). Learning as a function of time. *JER*. 13 (4), 183-194.

Frederick, W.C. et al. (1979). Time, teacher constraints and achievement in urban high schools. *JER*. 73 (2).

Frymier, J.R.; Kein, M.F. (1983). *Characteristics of Good Schools*. ASCD Conference. (Cassette Tape: Progress report on the Kappa Delta Psi "Good Schools" Project.)

Fuller, B. et al. (1982). The organizational context of individual efficacy. *Review of Educational Research*. 52 (1), 7-30.

Good, T.L.; Beckerman, T.W. (1978). Time on task: A naturalistic study in ninth grade classrooms. *Elementary School Journal*. 78, 193-201.

Good, T.L. et al. (undated). Curriculum pacing: Some empirical data in mathematics. *Journal of Curriculum Studies*. 10 (1), 75-81.

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Hunt, D.E. et al. (1983). Student conceptual level and models of teaching: theoretical and empirical coordination of two models. In B.R. Joyce et al. (Eds.) *Flexibility in Teaching*. New York: Longman.

Hutley, J.; Davies, I.K. (1976). Preinstructional strategies: The role of pretests, behavioral objectives, overviews and advance organizers. *RER*. 239-266.

Janicki, T.C.; Peterson, P.L. (1967). Aptitude-treatment interaction effects of variations in direct instruction. *AERJ*. 18 (1), 63-82.

Johnson, D.W. et al. (undated). Effects of cooperative, competitive and individual conditions on children's problem solving performance. *AERJ*. 17 (1), 83-93.

Joyce, B., et al. (1983). *The Structure of School Improvement*. New York: Longman.

Joyce, B.R. et al. (1981). Can teachers learn repertoire of models of teaching? In B.R. Joyce et al (Eds). *Flexibility in teaching*. New York: Longman.

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McKay, A. (undated). Project quest: Teaching strategies and pupil achievement. Research Report No. 79-1-3. Occasional Paper Series, Center for Research in Teaching, Faculty of Education, University of Alberta.

Mefum, R.F. (1978). Resolution of conflicting claims concerning the effect of behavioral objectives on student learning. *RER*. 48 (2), 291-302.

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Pflaum, S.W. et al. (1980). Reading instruction: A quantitative analysis. *Educational Researcher*. 9 (7), 12-18.

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Rutter, M. et al. (1979). *Fifteen Thousand Hours: Secondary Schools and Their Effects on Students*. Cambridge, Mass.: Harvard University Press.

Sharan, S. (1980). Cooperative learning in small groups: Recent methods and effects on achievement, attitudes and ethnic relations. *RER*. 50 (2), 241-272.

Sharpley, A.M. et al. (1983). An examination of the effectiveness of a cross age tutoring program in mathematics for elementary school children. *AERJ*. 20 (1), 103-112.

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RT 2037 Time on task: research results that point the way to increased student learning

RT 2025 What makes effective schools

5.3. Materials To Help Accomplish Objectives For "The Swamp"

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RT 1870 Creative problem solving in practice

RT 1939 Trainability of information - processing and problem solving skills

RT 2048 Creative problem solving

Chapter 6
Participant and Curriculum Evaluation Procedures

6.1. Participant Evaluation Procedures

Participant evaluation procedures are based on the following premises:

1. the purposes of participant evaluation are (a) to assist in making the best instructional decisions for individual participants and (b) to judge whether or not a minimum level of competence has been attained and sufficient progress has been achieved to warrant certification by the Ministry of Education;

2. no single source of data practically available is likely to be of sufficient quality to serve the purposes for participant evaluation.

Given these premises a procedure has been designed for participant evaluation consisting of three components: student self-evaluation, instructors' anecdotal records, and an assessment of case study responses. The entire array of objectives for the prototype curriculum (Chapter 2) provide the primary basis for evaluation within each component. In addition, the following criteria seem likely to be important to consider.

1. The candidate meets Ministry of Education enrolment qualifications for the course.

2. The candidate is expected to be in attendance at all course sessions. Failure to attend one or more sessions may result in make-up assignments or, in extreme cases, dismissal from the course. All absences must be cleared with the course principal.

3. All candidates are expected to participate actively in discussions, activities, and assignments within the home group.

4. Candidates are expected to participate and perform designated tasks in at least one committee organization.

5. Each candidate is expected to work on the preparation and presentation of a major course assignment based on a problem-solving task. Feedback will be provided to each group following the presentation.

6. Candidates are expected to actively work on the development of their leadership skills during the various group tasks and problem-solving sessions.

6.1.1. Student Self-Evaluation

The objectives outlined in Chapter 2 have been modestly adapted and incorporated into a self-rating form (Appendix A). This self-rating form is to be used just prior to entry into Part 1 of the curriculum. Assuming that Parts 1 and 2 are offered during consecutive summers and the practicum between the two parts, the form is also to be used just prior to entry into Part 2 and at the end of Part 2. This pattern of use

will assist participants in clarifying where their emphases should be placed during participation in the course. Participants will share the results of their assessments with instructors for planning purposes.

6.1.2. Instructors' Anecdotal Records

The interaction between participants and instructors is intended to be quite extensive during Parts 1 and 2, as suggested in Chapter 4. Instructors will keep an anecdotal record of the progress that they observe being made by individual students during such interaction. These records, kept weekly, should make as explicit reference as possible to the objectives outlined in Chapter 2.

A comparable record should also be kept by advisors during the practicum.

6.1.3. Responses to Case Study Problems

The prototype curriculum assumes a considerable amount of "hands-on" problem solving by participants as they respond to a series of case problems. These responses are sometimes individual and usually in writing: they serve as a record of the participants' competence and are to be evaluated in terms of how well they reflect achievement of selected curricular objectives.

6.2. Curriculum Evaluation Procedures

The procedures for curriculum evaluation are based on three premises:

1. the purpose for curriculum evaluation is course improvement;
2. the objects for evaluation are the components of the curriculum including its objectives, instructional strategies, curriculum materials, and student evaluation procedures;
3. no single source of practically available data is likely to be of sufficient quality to serve the purpose for the curriculum evaluation.

With these premises in mind, a curriculum evaluation procedure has been designed to provide both descriptive information and judgements about each curriculum component from 3 data sources: the participants, internal evaluators, and external evaluators.

Five components are to be included in the evaluation of Part 1, four of which are also to be used in the evaluation of Part 2.

6.2.1. Pre-Course Survey

A month prior to the beginning of the Part 1 course, candidates should be asked to complete a questionnaire primarily designed to inform staff of candidate's reasons for taking the course, relevant leadership experience, and familiarity with course content (for example, see Appendix B). Since it is likely that most candidates entering Part 2 are continuing from Part 1, this survey need not be carried out with them.

6.2.2. Assessment By Students

At the end of each week, candidates should be asked to rate the importance of each course objective addressed that week, how well each of the course objectives for the week has been addressed and how valuable was the contribution to that achievement of each component of instruction used that week. Appendix C is an example of a form that might be used for such a purpose. One course instructor and a committee of participants might be responsible for collating these data and making recommendations based on them to the staff of the following week.

6.2.3. Summative Assessment By Students

About two months after completion of Parts 1 and 2 participants should be asked to respond to a short questionnaire asking for their overall judgement regarding the value of the objectives and the instructional components included in the courses.

6.2.4. Internal Evaluation

An evaluator should observe both home group and large group sessions each day through the Part 1 and Part 2 courses. Extensive field notes should be kept of these observations and used by course staff to refine all aspects of the two courses.

6.2.5. External Evaluation

An external team of evaluators will carry out its own evaluation of Parts 1 and 2. The evaluations will consist of on-site observations of each course, interviews with students and the collection of questionnaire data from a random sample of about a third of the students.

6.3. Conclusion

This prototype curriculum is intended to reflect the best information available from current research about the nature of effective school administration practices. There remain, of course, alternative perspectives on the principal's role and reservations about the value of current research about the role. But this will always be the case and such lack of consensus is no reason to forego efforts to develop a curriculum designed to foster growth in the perspective outlined in Chapter 1. The justification for the prototype curriculum is based not on the absence of alternative perspectives, but the extent to which the perspective adopted in Chapter 1 can be justified. Evidence presented in that chapter seems quite compelling as it describes "the high ground" of school administration. Much, however, remains to be learned about effective practice "in the swamp"; aspects of the prototype curriculum focused on this component of school administration should therefore be viewed as quite tentative.

The curriculum design, as well, is intended to reflect state-of-the-art knowledge, in this case about effective adult instruction. But while the evidence on which the design is based is current, it does not inspire a lot of confidence. As a consequence, the design of the prototype curriculum requires implementation and systematic evaluation before its effects can be known with much certainty; a version of such evaluation is currently underway (McPhee, underway).

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Appendix A
Example of a Self-Rating Form

Example of An Instrument for the Self-Assessment of Needs of Candidates Applying for the Principal Certification Course

Loosely Based on The Principal Profile and
Adaptations of Hallinger & Mitman (November, 1985)

K. Leithwood

1. Principals' Goals

Great Extent_____Not at All 1_____4

1.1 Sources of Goals

Given sufficient opportunity to what extent do you feel able to:

1. Establish goals for the school which reflect ministry policy. 1_____4
2. Establish goals for the school which reflect board priorities. 1_____4
3. Establish goals for the school which reflect community and students, needs (including data on student achievement). 1_____4
4. Establish goals which reflect staff priorities. 1_____4

1.2 Nature of Goals

To what extent do your present educational goals:

1. Support an image of the learner as a self-directed problem solver. 1_____4
2. Include providing the best education and best experiences possible for students. 1_____4
3. Recognize the importance of student development in knowledge and skill as well as affect. 1_____4
4. Have sufficient concreteness that they can be readily translated into instructional objectives. 1_____4

1.3 Use of Goals

To what extent do you feel able to:

1. Communicate the school's goals to the school staff. 1_____4
2. Refer to the school's goals in informal settings with teachers. 1_____4
3. Discuss the school's goals with teachers at staff meetings. 1_____4
4. Refer to the school's goals when making curricular decisions with teachers. 1_____4
5. Ensure that the school's goals are reflected in highly visible displays in the school (e.g. posters or bulletin boards indicating the importance of reading or math) 1_____4
6. Refer to the school's goals in student assemblies and with those outside the school. 1_____4

2. Principals' Strategies (Selected)

2.1 Staff Supervision

To what extent do you presently feel able to:

1. Conduct informal observations in classrooms on a regular basis (informal observations are unscheduled, last at least 5 minutes, and may or may not involve written feedback or a formal conference). 1_____4

2. Ensure that the classroom objectives of teachers are consistent with the stated goals of the school. 1_____4

3. Review student work products when evaluating classroom instruction. 1_____4

4. Evaluate teachers on objectives directly related to those of the school. 1_____4

5. Point out specific strengths in teacher instructional practices in postobservation conferences. 1_____4

6. Point out specific weaknesses in teacher instructional practices in postobservation conferences. 1_____4

7. Note specific strengths of the teacher's instructional practices in written evaluation. 1_____4

8. Note specific weaknesses of the teacher's instructional practices in written evaluation. 1_____4

9. Note specific instructional practices related to the stated classroom objectives in written evaluation. 1_____4

2.2 Program Planning

1. Make clear who is responsible for coordinating the curriculum across grade levels (e.g. the principal, vice-principal, or a teacher). 1_____4

2. Ensure that the school's goals are translated into common curricular objectives. 1_____4

3. Draw on the results of schoolwide testing when making curricular decisions. 1_____4

4. Ensure that the objectives of special programs are coordinated with those of the regular classroom. 1_____4

5. Monitor the classroom curriculum to see that it covers the school's curricular objectives. 1_____4

6. Participate actively in the review and/or selection of curricular materials. 1_____4

2.3 Protecting Instructional Time

1. Ensure that instructional time is not interrupted by public-address announcements. 1_____4

2. Ensure that students are not called to the office during instructional time. 1_____4

3. Ensure that truant students suffer specified consequences for missing instructional time. 1_____4

4. Ensure that tardy or truant students make up lost instructional time. 1_____4

5. Visit classrooms to see that instructional time is used for learning and practising new skills and concepts. 1_____4

2.4 Direct Relations with Students

1. Take time to talk with students and teachers during recess and breaks. 1_____4

2. Visit classrooms to discuss school issues with teachers and students. 1_____4

3. Attend or participate in cocurricular or extracurricular activities. 1_____4

4. Tutor or provide direct instruction to students. 1_____4

5. Consistently model behaviours valued by the school for students. 1_____4

6. Provide opportunities for students to express their views on how well the school meets their needs. 1_____4

7. Use disciplinary situations to reinforce school's image of the educated person. 1_____4

2.5 Providing Staff with Knowledge & Skill

1. Inform teachers of opportunities for professional development. 1_____4

2. Select in-service activities that are consistent with the school's goals. 1_____4

3. Support teacher requests for in-service that is directly related to the school's goals. 1_____4

4. Distribute journal articles to teachers on a regular basis. 1_____4

5. Actively support the use of skills acquired during in-service training in the classroom. 1_____4

6. Arrange for outside speakers to make presentations on instruction at faculty meetings. 1_____4

7. Provide time to meet individually with teachers to discuss instructional issues. 1_____4

8. Sit in on teacher in-service activities concerned with instruction. 1_____4

9. Set aside time at faculty meetings for teachers to share ideas on instruction or information from in-service activities. 1_____4

2.6 Providing Incentives for Learning

1. Recognize students who do superior academic work with formal rewards such as an honour roll or mention in the principal's newsletter. 1_____4

2. Use assemblies to honour students for their academic work and/or behaviour in class. 1_____4

3. Recognize superior student achievement or improvement by seeing students in the office with their work products. 1_____4

4. Contact parents to communicate improved student performance in school. 1_____4

3.1 Factors of Most Concern

To what extent do you feel sufficently knowledgeable to try and influence:

1. The assignment of students to teachers. 1_____4

2. Program objectives and emphasis. 1_____4

3. Instructional behaviours of the teachers. 1_____4

4. Materials and resources in the classroom. 1_____4

5. Assessment, recording, and reporting procedures of teachers 1_____4

6. Time/classroom management. 1_____4

7. Content of the teacher's programs. 1_____4

8. Interpersonal relationships in the classroom. 1_____4

9. Physical environment of the classroom. 1_____4

10. Integration across subjects and grades. 1_____4

11. Human resources in the school. 1_____4

12. Material and physical resources in the school. 1_____4

13. Relationships with community. 1_____4

14. Extracurricular and intramural activities. 1_____4

15. Relationships with out of school staff. 1_____4

16. Relationships among staff. 1_____4

17. Student behaviour while at school. 1_____4

18. Teachers' relationships with student while out of the classroom. 1_____4

3.2 Nature and Source of Expectations

To what extent do you:

1. Have concrete, specific expectations regarding factors (as identified in 3.1 above). 1_____4

2. Base your expectations on research and competent professional judgements. 1_____4

4. Decision Making

To what extent are you able to:

1. Use a variety of forms and procedures for decision making. 1_____4

2. Choose decision-making focus and procedures after a careful analysis of such things as nature of task and skills of others involved. 1_____4

3. Involve staff in those decisions that affect them when their skill and willingness permits. 1_____4

4. Base decisions on the best available information. 1_____4

Appendix B
Example of a Pre-Course Survey

NAME_____

Advance Organizer for Course 1 - Training for the Certification of School Principals

1. Motivation

1.1 Why did you decide to enrol in the Principal's Course at OISE?

_____
_____
_____

1.2 What kinds of personal growth and development are you hoping to achieve?

_____
_____
_____

1.3 What contributions do you think you can make to the growth and development of the other participants in the program?

_____
_____
_____

1.4 Indicate with a check the nature of the leadership roles that you have undertaken in your school and/or system.

1.5 Indicate to what extent you have found the tasks rewarding. Circle the appropriate response.

		Very Unrewarding				Very Rewarding
___1.	Acting principal	1	2	3	4	5
___2.	Acting vice-principal	1	2	3	4	5
___3.	Department head	1	2	3	4	5
___4.	Chairperson of school/board committee	1	2	3	4	5
___5.	Consultant	1	2	3	4	5
___6.	Coordinator	1	2	3	4	5
___7.	Writing team leader	1	2	3	4	5
___8.	Implementor of a new program	1	2	3	4	5

___9. Division leader..... 1..... 2..... 3..... 4..... 5

___10. Designated teacher..... 1..... 2..... 3..... 4..... 5

___11. Federation leadership..... 1..... 2..... 3..... 4..... 5

___12. Chairperson of P.D. activities..... 1..... 2..... 3..... 4..... 5

___14. Teaching professional courses..... 1..... 2..... 3..... 4..... 5

___15. Other (please specify)..... 1..... 2..... 3..... 4..... 5

1.6 List the leadership tasks you have performed below and rate them in terms of personal interest in comparison to your regular tasks. (Circle the appropriate response.)

Task	Very Boring				Very Interesting
1.....	1	2	3	4	5
2.....	1	2	3	4	5
3.....	1	2	3	4	5
4.....	1	2	3	4	5

1.7 What motivated you to assume the leadership roles checked off above?

_____

_____

_____

1.8 What skills and/or knowledge did these tasks demand?

_____

_____

_____

1.9 Are there particular skills and/or knowledge lacking in your repertoire to carry out these tasks?

_____

_____

_____

2. GOALS

2.1 To what extent are you familar with Ontario Ministry of Education goals? (Circle the appropriate response).

unfamiliar very familiar
1 2 3 4 5

2.2 To what extent are the goals reflected in your own schools or classroom?

_____

_____

_____

2.3 Which ones do you emphasize?

_____

2.4 Which ones do you ignore?

3. IMAGE OF THE PRINCIPAL

3.1 In a couple of sentences describe the work style(s) of the principal(s) with whom you have worked.

3.2 How would describe the role of an effective principal?

3.3 If you see any discrepancies between 2.1 and 2.2, what do you think accounts for them?

3.4 What specific expectations do you have of the principals with whom you work?

4. DECISION MAKING

4.1 How would you describe the decision-making process in your school? (Check those which apply).

i) autocratic.....collaborative.....
ii) systematic.....ad hoc.....
iii) consistent.....inconsistent.....
iv) flexible.....inflexible.....

4.2 In your opinion, what would constitute an effective decision-making process in your school? Why?

4.3 If there are discrepancies what do you think accounts for them?

5. FACTORS

Factors are those aspects of the school which are experienced directly by the student and which significantly influence what they learn.

5.1 What are the most important things that you want students to get out of the time that they spend in your school?

5.2 What factors in the school will have the greatest influence on students accomplishing these things?

5.3 Select one of the above factors and indicate how you might go about influencing that feature if you were in a leadership position?

6. STRATEGIES

Strategies are clusters of related actions taken by the principal to influence factors chosen for attention.

6.1 What kinds of actions or strategies do you see as most effective in influencing the factors identified in Question 5?

6.1 With which of these actions or strategies have you had experience?

Appendix C
Example of a Weekly Rating Form

A. Rate how each objective was addressed (Circle one response).

	Well Addressed	Poorly Addressed	Not Addressed
2. Goals			
Course participants will:			
2.6 know about and analyse broad social and educational policies affecting schools, their intent and substance (e.g. Bill 82).			
3. Factors			
Course participants will:			
3.1 know about classroom factors (e.g. instruction, time on task).			
3.2 know about the conditions within each factor that appear to have the most positive impact on school learning, taking into account such variables as area of study, level of difficulty, type of objective, type of student.			
3.3 know how to select classroom factors most likely to facilitate student growth in relation to the goals of education.			
3.4 know about the status of knowledge linking selected factors to student learning.			

B. Contributions to achieving objectives (Circle one response for each component).

	Very Much		Very Little	Not At All
1. Text				
Improving Principal Effectiveness				
• Chapter 11				
• Chapter 12				
2. Reading and Questions				
• *Using Bureaucratic and Cultural Linkages to Improve Instruction*				
• *Analyzing a School*				
3. Guest Speakers				
• A ( )				
• B ( )				
• C ( )				
• D ( )				
4. Resident Speakers				
• ( )				
5. Interaction with Group Leaders and Home Base Sessions				
6. Group Leaders' Materials				
7. Written Assignment				
8. Counseling Sessions				
9. Acorn				

C. What aspect(s) of this week were most useful to you? Why?

D. Which aspect(s) of the week could be improved? Why?